

MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL
RAILROAD AND FINANCIAL NEWSPAPER.

TEXAS OIL AND THE WORLD'S FUEL.

[London Iron and Coal Trades Review.]

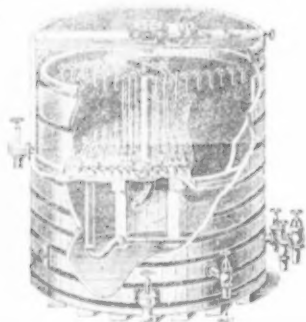
In an interesting paper recently read on "The Industrial Potentialities of the South" by Mr. R. H. Edmonds, the editor of the Manufacturers' Record of Baltimore, it is stated that there are at present 70,000 to 80,000 oil wells in the United States, producing about 160,000 barrels a day, but that a dozen new wells in Texas have a capacity exceeding that of all the wells hitherto existing throughout the country, having a capacity of several hundred thousand barrels a day. This, he adds, is "the greatest store of fuel oil that has ever been found," and "so great is the quantity, and so advantageously is it located for water transportation, that for all sections of the Atlantic and Gulf coast of North and South America, for the West Indies, and for much of Europe, Texas can at least dictate the price of fuel." Mr. Edmonds is better informed than most men as to Southern affairs, and although the ardor of his belief in Southern prospects may color his predictions, he has often been accurate in his previous forecasts, and does not altogether "speak without book." Nor must we omit to place to the credit of the South its wonderful industrial achievements in the past. Since 1880 the output of coal in the Southern States has advanced from 6,000,000 to 48,000,000 tons; the output of pig-iron has risen from less than 500,000 to more than 2,500,000 tons; the railroad mileage has increased from 20,000 to 53,000 miles, and the capital invested in manufactures has grown from \$215,000,000 to \$1,000,000,000. In 1900 the South produced more than 15,000,000 barrels of petroleum, and the value of the manufactured products in the same region rose during the last twenty years from \$445,000,000 to \$1,500,000,000. To a territory that has already achieved so much great possibilities seem to lie in the future, and while we do not endorse the view that American petroleum is destined to wipe out British coal entirely, we do not doubt that oil fuel will play an increasingly important part in the world's industrial development.

THE FULL TABLE OF CONTENTS WILL BE FOUND ON PAGE 34.

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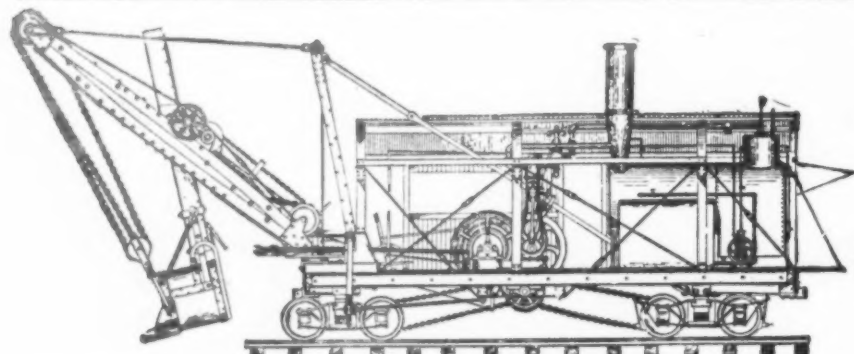
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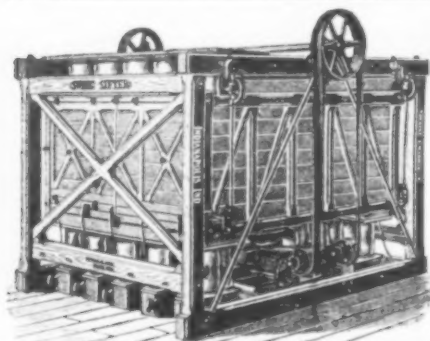
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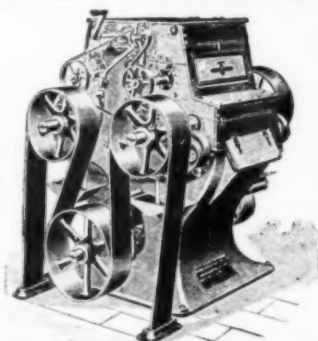
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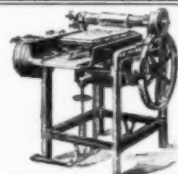
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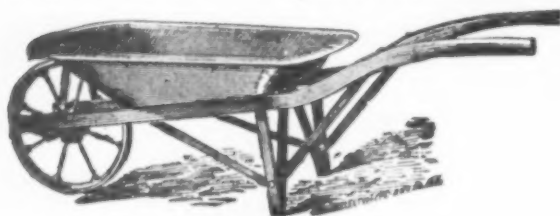


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Classified Index of Advertisers.

FOR ALPHABETICAL INDEX See Page 37.

- Acid Chambers.**
Caroline Iron Works, Baltimore, Md.
Robertson Mfg. Co., James, Baltimore, Md.
Valk & Murdoch Iron Wks., Charleston, S. C.
- Accountants.**
The Audit Co. of New York, New York, N. Y.
- Accumulators.**
Bushnell Press Co., G. H., Thompsonville, Conn.
Watson-Stillman Co., New York, N. Y.
Wood, E. D., & Co., Philadelphia, Pa.
- Adding Machines.**
American Arithmometer Co., St. Louis, Mo.
- Agents.** (Manufacturers and Producers.)
Morrison & Kindervater, Richmond, Va.
Phillips, Edward W., Baltimore, Md.
- Agricultural Implements.**
Farquhar Co., Ltd., A. B., York, Pa.
Hench & Dromgold, York, Pa.
- Agricultural Shapes.**
American Steel Hoop Co., New York, N. Y.
- Air Brakes.**
Westinghouse Air Brake Co., Pittsburg, Pa.
- Air Compressors.**
Clayton Air Compressor Works, New York, N. Y.
Hardie-Tynes Fdy. & Mch. Co., Birmingham, Ala.
Ingersoll-Sergeant Drill Co., New York, N. Y.
McKernan Drill Co., New York, N. Y.
Rand Drill Co., New York, N. Y.
Smith Machine Co., H. B., Smithville, N. J.
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Humboldt Metal Works, South Somerville, N. J.
Magnolia Metal Co., New York, N. Y.
Merchant & Co., Inc., Philadelphia, Pa.
Ryan, J. J., & Co., Chicago, Ill.
- Antimony.**
Hertz, Theo., & Son, St. Louis, Mo.
Magnolia Metal Co., New York, N. Y.
Ryan, J. J., & Co., Chicago, Ill.
- Architects.**
Bryan, A. J., & Co., Memphis, Tenn.
Makepeace, C. R., & Co., Providence, R. I.
Milburn, Frank P., Columbia, S. C.
Fraxay, C. M., & Co., Providence, R. I.
Simpson, A. D., Birmingham, Ala.
Walter & Legare, Columbia, S. C.
Wheeler, McMichael & Co., Charlotte, N. C.
- Architectural Iron Works.**
American Bridge Co., New York, N. Y.
American Machine & Foundry Co., Hanover, Pa.
Belmont Iron Works, Philadelphia, Pa.
Eureka Supply Co., Chattanooga, Tenn.
Lombard Iron Works & Supply Co., Augusta, Ga.
Lykes, John D., Birmingham, Ala.
Sanders Mfg. Co., Dalton, Ga.
Schreiber, L., & Sons Co., The Cincinnati, O.
Virginia Bridge & Iron Co., Roanoke, Va.
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Keasbey & Mattison Co., Ambler, Pa.
Southern Asbestos Mfg. Co., Richmond, Va.
- Attorneys.**
Corder, Edward, Spencer, W. Va.
Hanlon, Thos. F., Washington, D. C.
- Babbitt Metal.** [See Anti-Friction Metal.]
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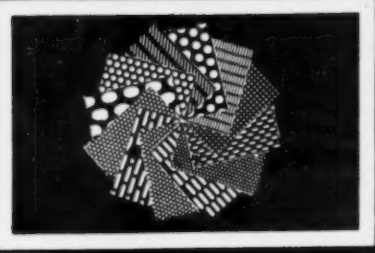
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Classified Index of Advertisers.

For ALPHABETICAL INDEX See Page 37

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Chester Steel Castings Co., Philadelphia, Pa.
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Jeffrey Mfg. Co., The Columbus, O.

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Obermayer Co., Cincinnati, O.

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Carbendale Chemical Co., Carbendale, Pa.

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Froehling, Dr. Henry, Richmond, Va.

Chloride of Calcium.
Carbendale Chemical Co., Carbendale, Pa.

Chucks.
Bealy, Chas. H., & Co., Chicago, Ill.

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Classified Index of Advertisers.

FOR ALPHABETICAL INDEX See Page 37

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American Blower Co., Detroit, Mich.
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Dumbwaiters.

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Heartley Mch. Variety Iron & Tool Works, Toledo, O.

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Northern Elec. Mfg. Co., Madison, Wis.
Stanley Elec. Mfg. Co., Pittsfield, Mass.
Weatherford & Hildebrand, Memphis, Tenn.

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Bunnell, J. H., & Co., New York, N. Y.
Northern Electric Supply Co., Madison, Wis.
Stanley Electric Mfg. Co., Pittsfield, Mass.

Electric-Light and Power Plants.

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Crocker-Wheeler Co., Amper, N. J.
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General Incandescent Arc Light Co., New York, N. Y.
Gregory Electric Co., Chicago, Ill.
N. J. Foundry & Machine Co., Plainfield, N. J.
Northern Electrical Mfg. Co., Madison, Wis.
Ridgway & Dynamo & Engine Co., Ridgway, Pa.
Smith, Samuel J., & Co., Philadelphia, Pa.
Sprague Electric Co., New York, N. Y.
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Westinghouse Elec. & Mfg. Co., Pittsburgh, Pa.
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Tower-Binford Elec. & Mfg. Co., Richmond, Va.

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Gregory Electric Co., Chicago, Ill.
Guarantee Electric Co., Chicago, Ill.
Jenks, W. H., Richmond, Va.
Johns Mfg. Co., H. W., New York, N. Y.
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Northern Electrical Mfg. Co., Madison, Wis.
Smith, Samuel J., & Co., Charlotte, N. C.
Stanley Electric Mfg. Co., Pittsfield, Mass.
Sturtevant Co., B. F., Boston, Mass.
Triumph Electric Co., Cincinnati, O.
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Westinghouse Elec. & Mfg. Co., Pittsburgh, Pa.

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Electric Trucks.

Baldwin Locomotive Works, Philadelphia, Pa.

Electrotypers.

American Type Founders Co., Baltimore, Md.
Spencer & Hall, Baltimore, Md.

Elevators.

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Bartlett, Hayward & Co., Baltimore, Md.
Bates, James, Sons, Baltimore, Md.
Craig Ridgway Co., Covington, La.
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Eaton & Prince Co., Chicago, Ill.
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Paul Le Roy & Co., Baltimore, Md.
Link-Belt Engineering Co., Philadelphia, Pa.
Maryland Foundry & Machine Co., Baltimore, Md.
Morse, Williams & Co., Philadelphia, Pa.
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Westbrooks, J. B., Fdry. & Mch. Co., Danville, Va.

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Clark Co., The W. J., Salem, O.
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Tate, Jones & Co., Pittsburg, Pa.

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Dufur & Co., Baltimore, Md.
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Scranton Corundum & Emery Wheel Co., Scranton, Pa.
Tanite Co., The, Stroudsburg, Pa.

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Given, Wm. M., Birmingham, Ala.
Hall, Charles A. M. E., Mobile, Ala.
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Lederle, Frank Atlanta Ga.

McRae, M. W., Atlanta, Ga.
Morrison & Kindervater, Richmond, Va.
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Pratt Laboratory, N. P., Atlanta, Ga.
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Boston Blower Co., Hyde Park, Mass.
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Fairbanks Co., Baltimore, Md.
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Flower, Walter L., & Co., St. Louis, Mo.
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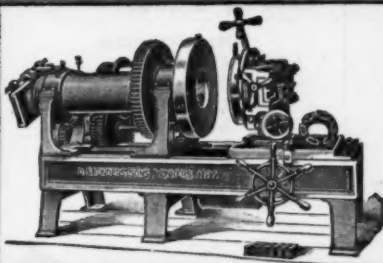
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Carolina Fire-Brick Works, Killian, S. C.
Garden City Sand Co., Chicago, Ill.
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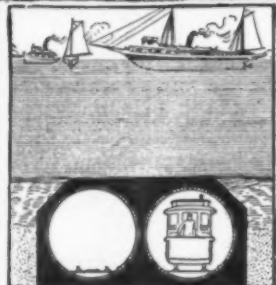
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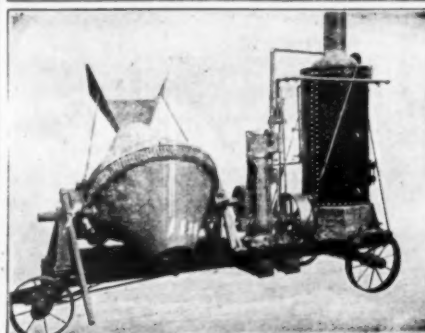
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For ALPHABETICAL INDEX See Page 37.

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Dow Wire Works Co., Louisville, Ky.**Flooring.** (Polished Hardwood.)Adams, J. M., Baltimore, Md.
Forman, Thos., Co., Ltd., Petoskey, Mich.
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Buffalo Forge Co., Buffalo, N. Y.
Crumlish Forge Co., Buffalo, N. Y.
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Obermayer Co., S., Cincinnati, O.
Paxson Co., J. W., Philadelphia, Pa.**Foundry Ladles.** (See Foundry Equipment)**Fruit Evaporators.**

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Wetherow, Jas. P., Pittsburg, Pa.**Furnace Heating.** (Stoves.)

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Morse, Williams & Co., Philadelphia, Pa.
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McClave, Brooks & Co., Scranton, Pa.**Grates.** (Domestic.)

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Caldwell, H. W., & Son Co., Chicago, Ill.
Clark Co., The W. J., Salem, O.
Dodge Mfg. Co., Mishawaka, Ind.
Jeffrey Mfg. Co., Columbus, O.
Link-Belt Engineering Co., Nicetown, (Phila.) Pa.**Graphite.**Detroit Graphite Mfg. Co., Detroit, Mich.
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Scranton Corundum & Emery Wheel Co., Scranton, Pa.
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Vitrified Wheel Co., Westfield, Mass.**Groovers.**

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Fay, J. A., & Co., Cincinnati, O.
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Trevor Mfg. Co., Lockport, N. Y.**Hardware Specialties.**Covert Mfg. Co., West Troy, N. Y.
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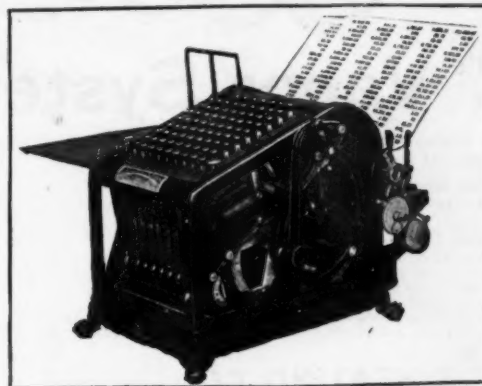
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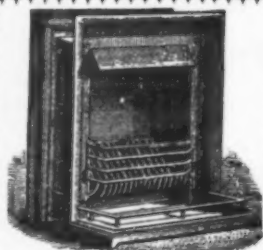
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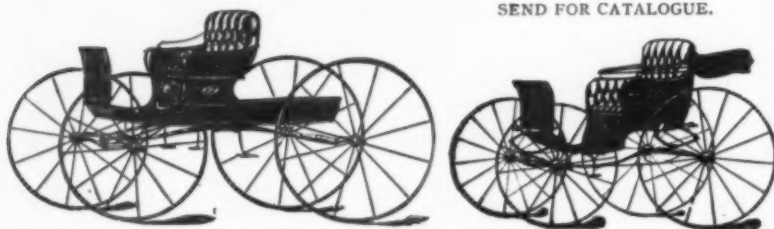
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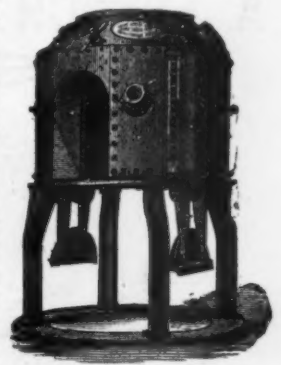
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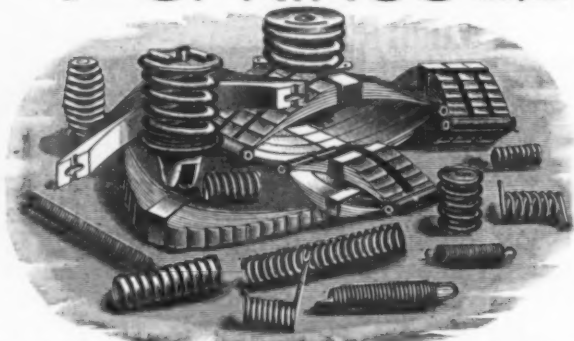
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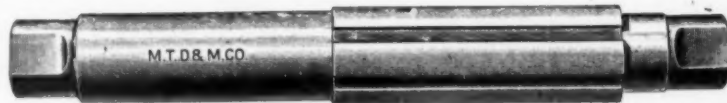
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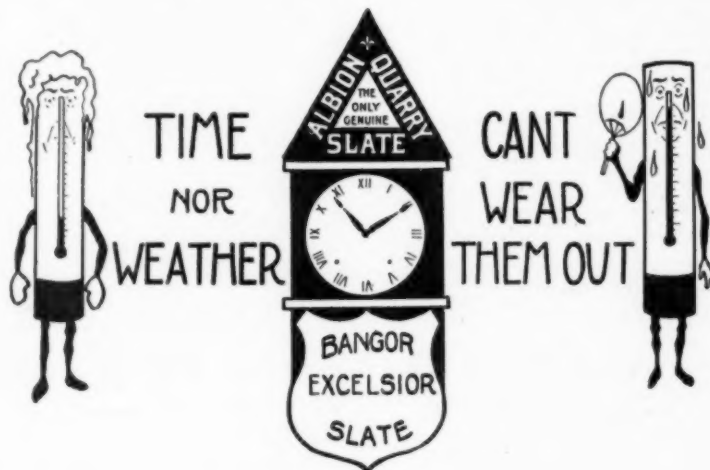
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For ALPHABETICAL INDEX See Page 27

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Bostedo Pneumatic Tube Co., Chicago, Ill.**Power Transmission Machinery.**Caldwell, H. W., & Son Co., Chicago, Ill.
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Wood's, T. B., Sons, Chambersburg, Pa.**Pulleys.** (Wood Split.)Davis, F. H., & Co., Boston, Mass.
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Dodge Mfg. Co., Mishawaka, Ind.
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Fairbanks Co., Baltimore, Md.
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Schofield, J. S., Son Co., Macon, Ga.Caldwell-Bierce & Smith-Vallie Co., Dayton, O.
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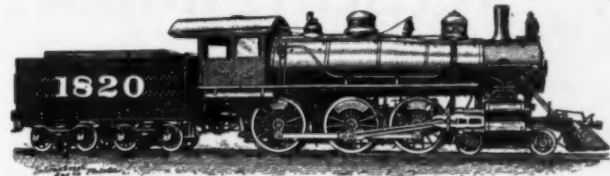
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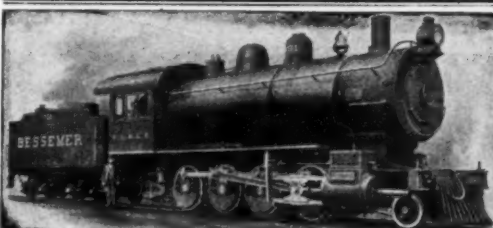
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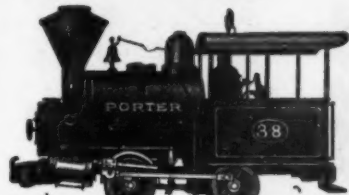
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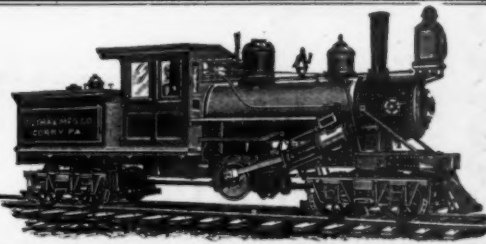
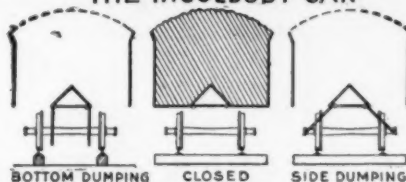
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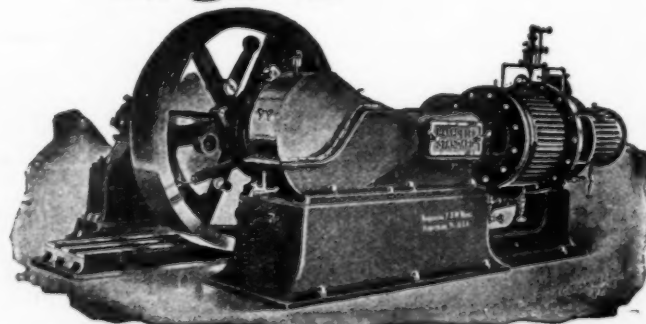
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Classified Index of Advertisers.

For ALPHABETICAL INDEX See Page 37.

Self-Measuring Shop Oil Cabinet.
Bowers & Co., S. F. Ft. Wayne, Ind.

Separators. (Dust.)
Allington & Curtis Mfg. Co., Saginaw, Mich.
Sterling Blower & Pipe Mfg. Co., Hartford, Conn.
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American Tool Works Co., Cincinnati, O.
Austin Separator Co., Detroit, Mich.
Bourne & Sons, & Co., Pittsburg, Pa.
Harrison Safety Boiler Works, Philadelphia, Pa.

Shapers.
American Tool Works Co., Cincinnati, O.

Sheet-Metal-Working Machinery.
[See Metal-Working Machinery.]

Sheet Steel and Iron.
American Sheet Steel Co., New York, N. Y.

Shingle, Lath and Stave Machinery.
[See Woodworking Machinery.]

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Hammond Iron Works, Warren, Pa.
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Lykes, John D., Birmingham, Ala.

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Schreiber L., & Sons Co., The, Cincinnati, O.
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Harry Brothers Co., Dallas, Tex.
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York Mfg. Co., York, Pa.

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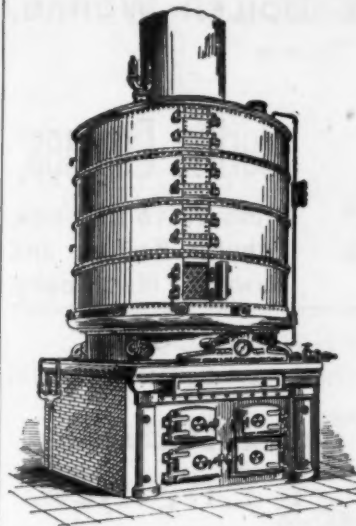
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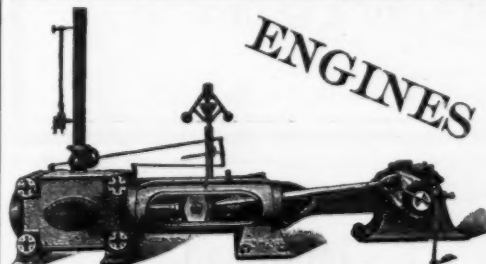
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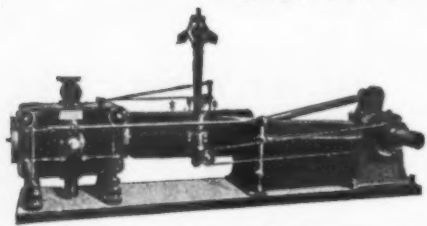
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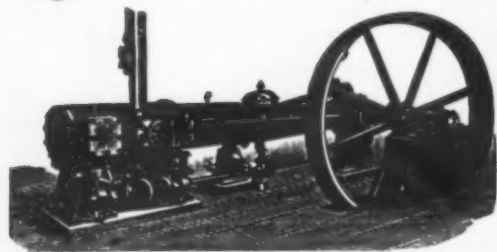
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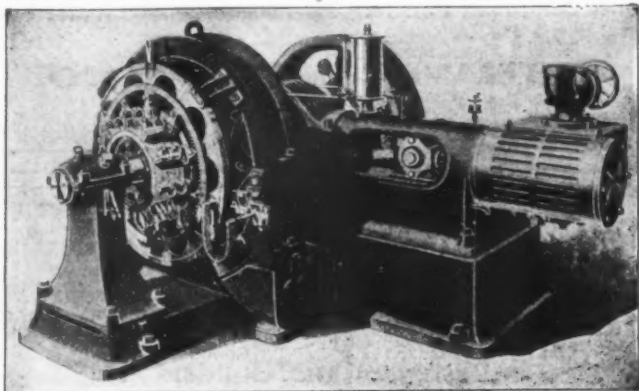
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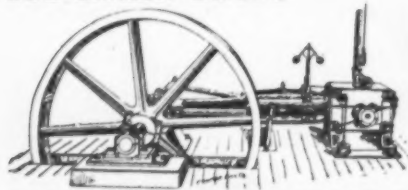
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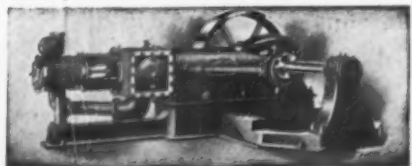
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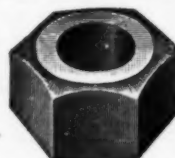
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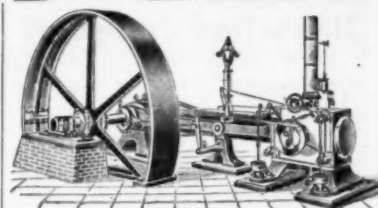
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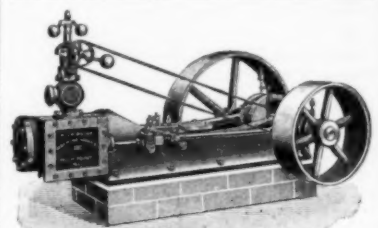
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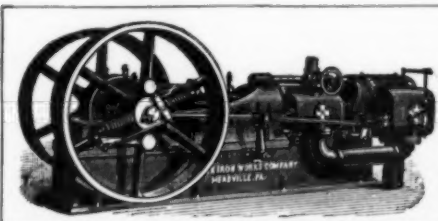
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American Ship Windlass Co., Providence, R. I.

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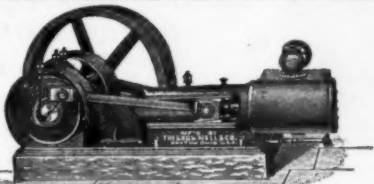
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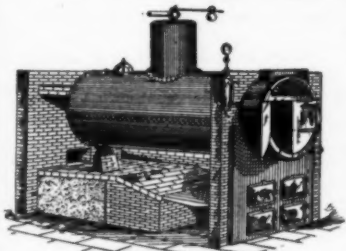
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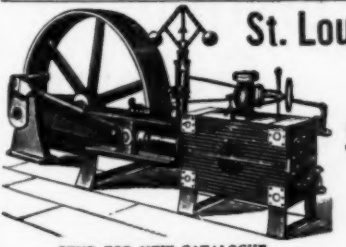
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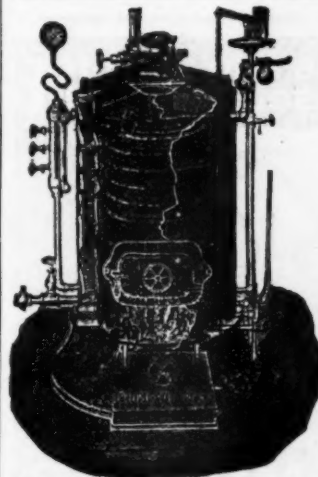
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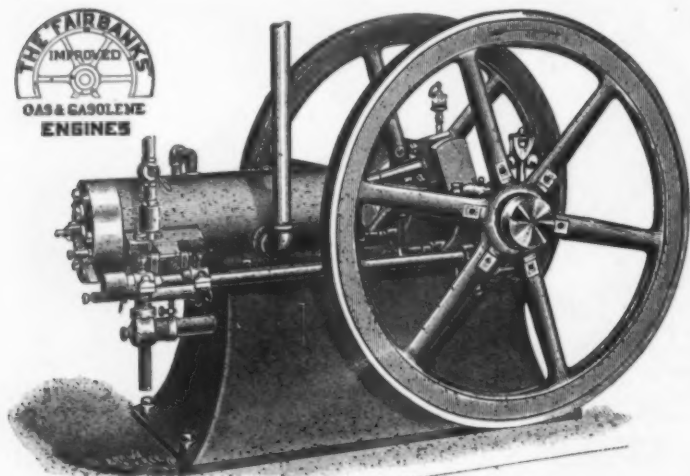
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With Rivet Holes Drilled after Plates are Bent and in Position. Tanks and Sheet Iron Works, Engines, Cotton Gins and Presses. Machinery for Fertilizer Works and Phosphate Washers, Asbestos Magnesia Pipe Covering and Magnesia Cement Felting for Boilers, Domes, Steam Piping, etc.

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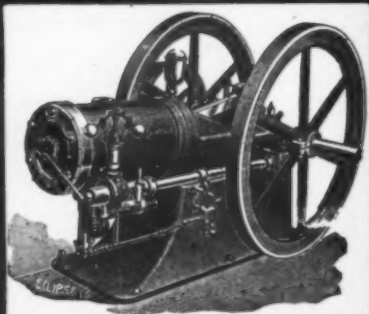
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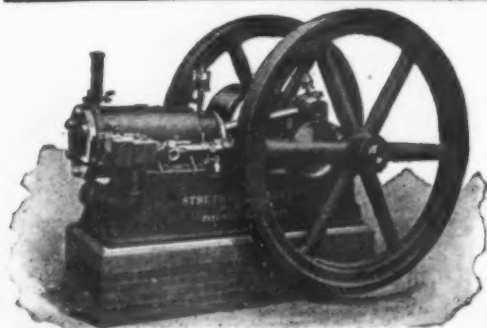


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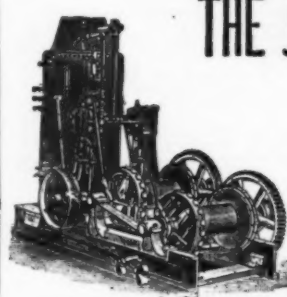
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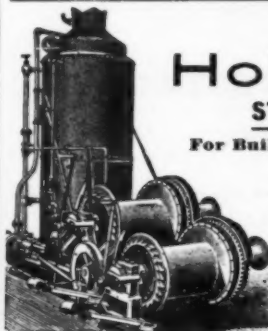
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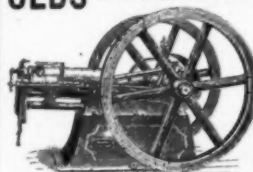
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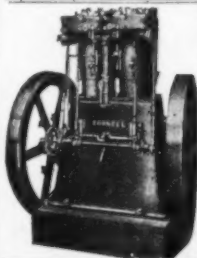
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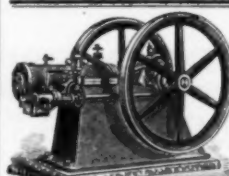
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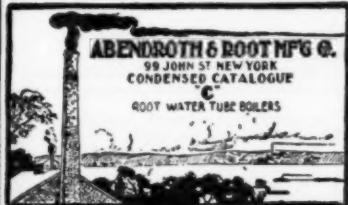
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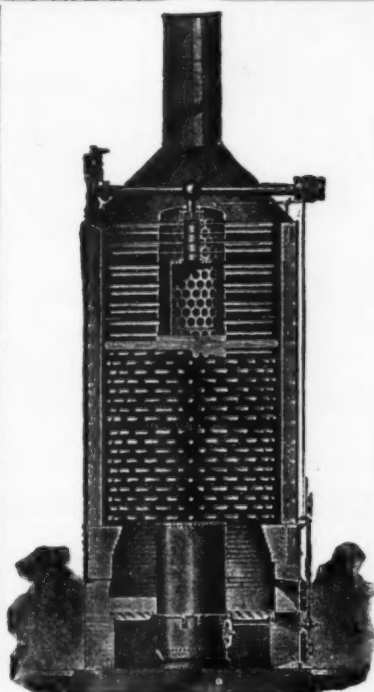


It explains why the

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Now our earliest customers like to write and tell about the good service our boilers are still giving after 18 to 20 years' of use. This should be a valuable suggestion to you.

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USE THE Clark Regulator Alarm Column

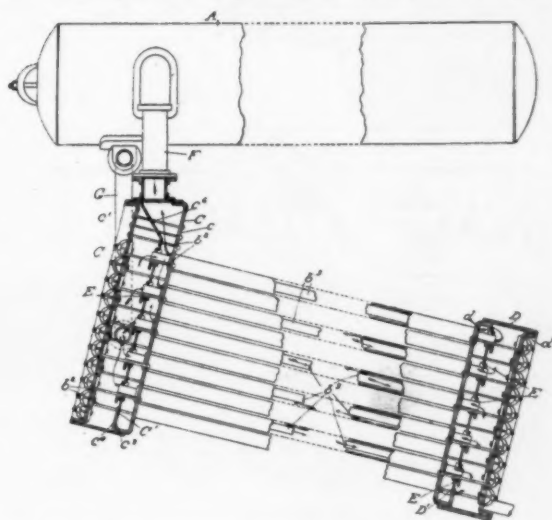
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Water Tube Boiler

gives a more rapid circulation than any other boiler. All parts interchangeable and easily removed and replaced. Readily cleaned, and will keep clean longer than any other boiler. Simple in design and construction. Only two



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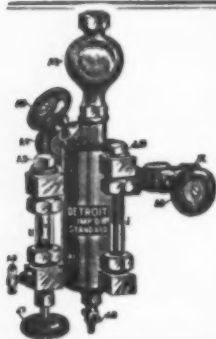
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THE DETROIT SIGHT FEED LUBRICATORS

possess all the improvements and good features that have been suggested by our own and our customers' experience during the past 20 years.

They are being used by more than nine-tenths of the prominent American engine builders, who are good judges of lubricators. Many of these have used them continuously for more than 15 years.

There are more than 550,000 Detroit Sight Feed Lubricators in use, or more than all other styles combined.

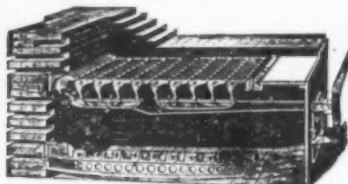
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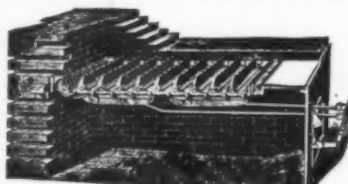
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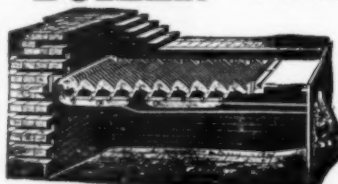
McCLAVE'S IMPROVED GRATE and ARGAND STEAM BLOWER For BOILER and Other Furnaces



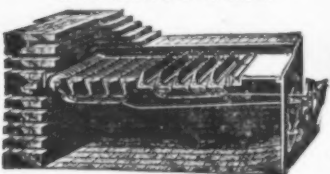
NORMAL POSITION OF GATE.



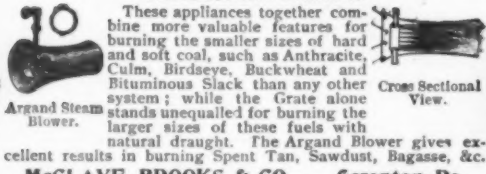
WHOLE CUT-OFF MOVEMENT.



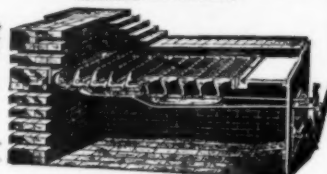
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DIVIDED CUT-OFF MOVEMENT.



Cross Sectional View.



DIVIDED CUT-OFF MOVEMENT.

These appliances together combine more valuable features for burning the smaller sizes of hard and soft coal, such as Anthracite, Culm, Birdseye, Buckwheat and Bituminous Slack than any other system; while the Grate alone stands unequalled for burning the larger sizes of these fuels with natural draught. The Argand Blower gives excellent results in burning Spent Tan, Sawdust, Bagasse, &c.

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CARS,
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You should see our Gravity
Filter (see cut), no waste
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material needed.
Sent on 30 day trial.

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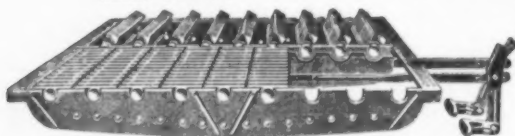
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10 to 20 PER CENT.
MORE AIR SPACE IN

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Than Any Grate Made.

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Require no alteration in fur-
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Very easily set. Is both
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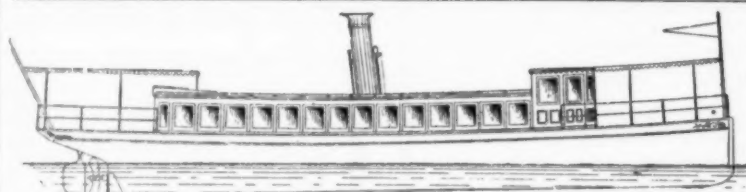
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Outfits—Either Wood or Coal-Burning Marine Boilers.

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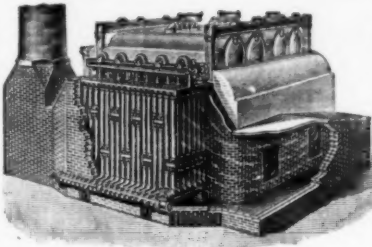
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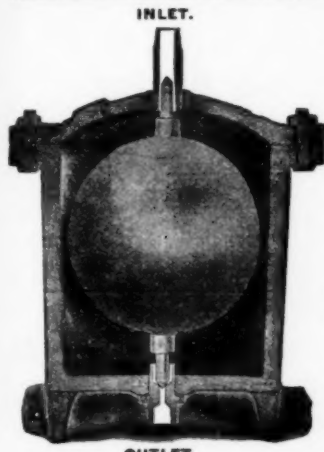
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Sole Manufacturers in the U.S.A.

in the Power Plant of whatever character will keep the feed-water heated above the evaporative point, keeping the circulation at its highest possible tension, thus producing the greatest economy. Our concentration of purpose in perfecting our Economizer has resulted in a perfect equipment. **10 to 20 per cent.** saving in fuel bill. We use the waste gases entirely. See our booklet, "Green's Economizer," free.

THE
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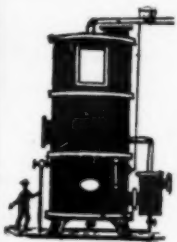
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EUREKA IRON CO.

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Respectfully,
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Sturgeon River Lumber Co.
Send for Catalogue.

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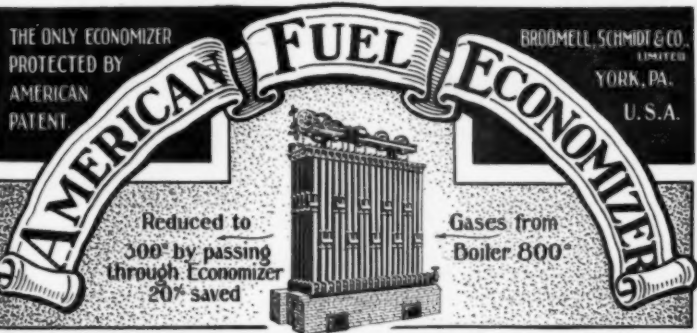
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THE ONLY ECONOMIZER PROTECTED BY AMERICAN PATENT.



BROOMELL, SCHMIDT & CO. LIMITED
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Gases from Boiler 800°



Millett's Patent Portable Core Oven

All complete and ready to put the fire in.

No one who makes small cores can afford to be without it.

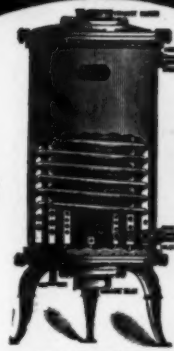
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Saves Fuel. Saves Time.

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Some Points of Excellence OF THE NATIONAL.



1,000,000 H. P. In Daily Use.

THE NATIONAL.

It delivers water to the boiler at 210° F. No inside joints to leak. No straight tubes to leak. No back pressure is possible. No contact of water with shell or iron. No chances of grease in boiler.

THE NATIONAL FEED-WATER HEATER

WE ALSO MANUFACTURE

Coils and Bends OF IRON, COPPER, BRASS AND PIPE.



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a low water alarm—a high water alarm—a combination of both, or each separate as desired.

The simplest, most durable, most efficient water column on the market. We make the

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Write for particulars.

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CAN YOU LIFT YOURSELF BY YOUR BOOT STRAPS?



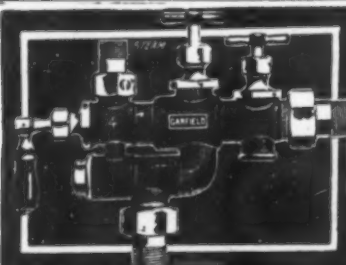
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Your live steam injector may be putting water into your boilers at a temperature of 150° F. Do you therefore think that the only saving you can make by increasing the temperature would be the difference between water at 150° and water at 210°, or say 65 of a saving? Not at all. As far as coal saving is concerned, you are actually feeding cold water at the temperature of the initial supply, which may be only 30°, or 40°, or an average of 50°; the year round. A COCHRANE HEATER with just enough exhaust steam to do the work generally one-seventh of all the steam the boilers are making will save, in the average plant, 16% of all the coal used while that injector was being operated, regardless of the temperature of the water delivered by the injector.

The heat the injector put into the water came from the boiler. The pull you put on your boot straps comes from within you self. Think this over—write us, and we will tell you how to apply the force at the proper point that will lift you out of a rut.

Harrison Safety Boiler Works,

Allegheny Avenue and 14th Street,
PHILADELPHIA, PA.

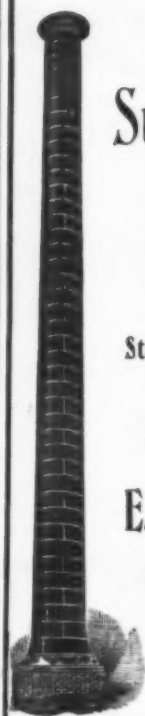


The Garfield Double Jet INJECTOR.

The right Injector for stationary boilers. No movable parts—simple, efficient.

Send for complete Injector Catalogue.

The Ohio Injector Co.
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Stand Pipes, Tanks,
HIGH GRADE
BOILERS

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Established 1865

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The cut is a Stack
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Fuel, Repairs, Stoppages.
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PIPE HEAD
Prevents the rotting
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EXHAUST SYSTEMS,

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Send \$1 for
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You don't have
to hunt for cen-
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You get it full measure
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Acme Oil Filter.

It gives you good, clean, pure oil, and
has greater filtering capacity
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"THE BERRYMAN" Feed-Water Heater and Purifier

PROVIDED WITH
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It Never Leaks.

"THE HIGHEST GRADE ONLY."



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BERRYMAN HEATERS

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SURFACE CONDENSERS.
EXPANSION JOINTS.
ARE MADE BY THE TAUNTON LOCOMOTIVE MFG. CO.—TAUNTON MASS.

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Selling Feed Water Heaters BY MAIL is our specialty.

18 years as sellers and manufacturers is the price we have paid for our experience. Our improved machinery and methods for manufacturing greatly REDUCES THE COST AND YOU GET THE BENEFIT OF IT.

THE IMPROVED BERRYMAN (KELLEY'S PATENT) WATER TUBE FEED WATER HEATER AND PURIFIER

This heater is designed with special reference to obtaining highest results and greatest durability. All materials are of a quality and weight to successfully withstand years of usage, and workmanship is of the highest grade.

Benj. F. Kelley & Son
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91 Liberty St., New York

There's None Better

AUSTIN SEPARATOR CO.,
Detroit, Mich.

Gentlemen:

The two Austin Separators that we have in use in our power plant, one in our 10" line and one in our 14" line are giving most excellent satisfaction. We cannot ask for anything better.

Yours truly,

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Lancaster Mills.

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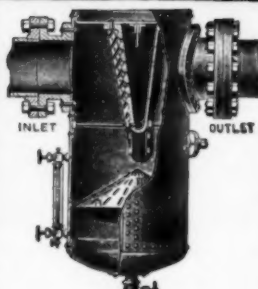


Fig. D, Horizontal.

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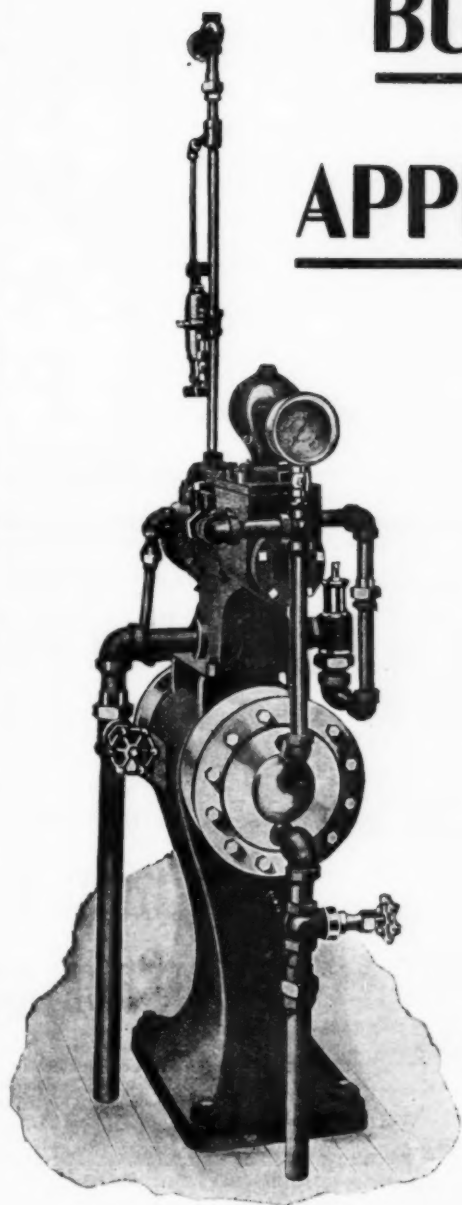
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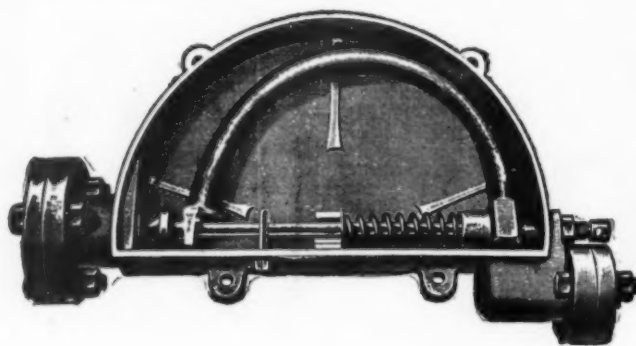
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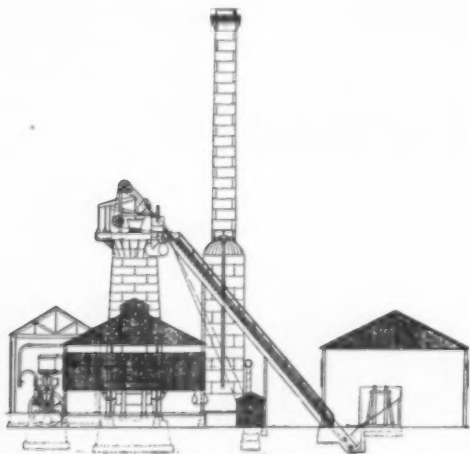
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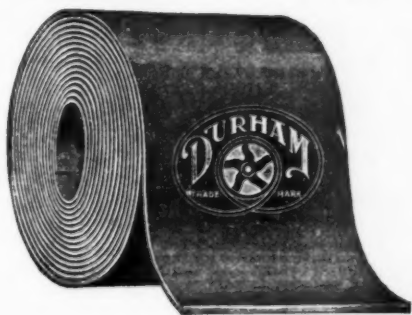
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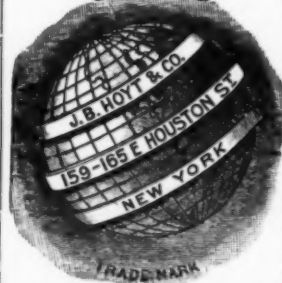
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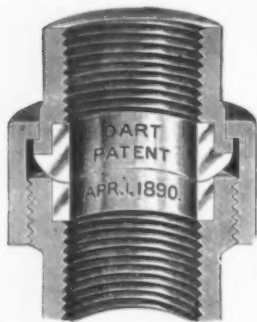
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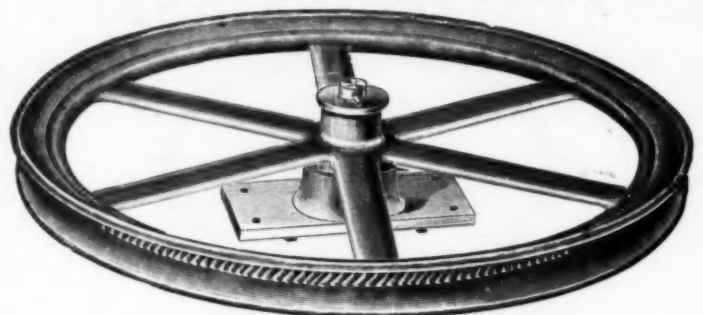
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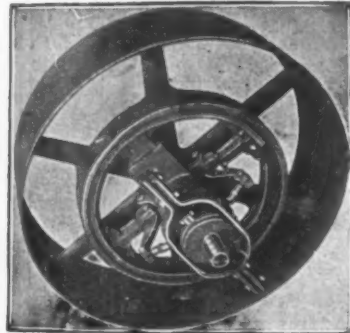
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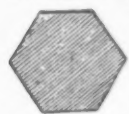
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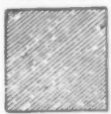
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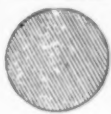
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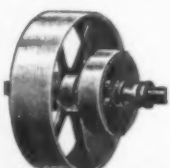
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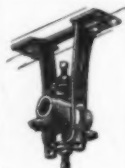
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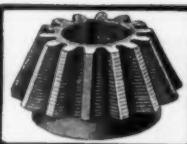
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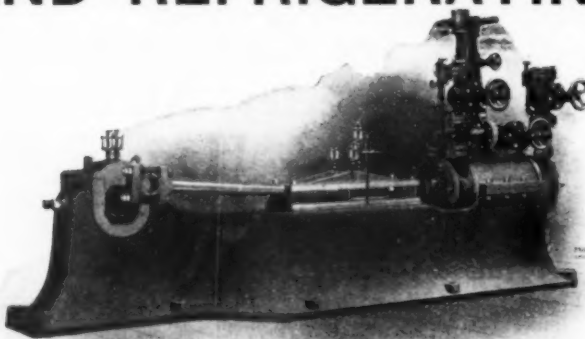
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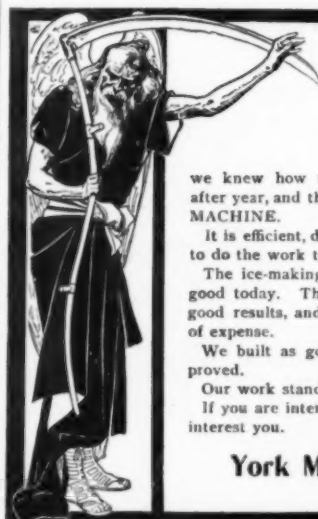
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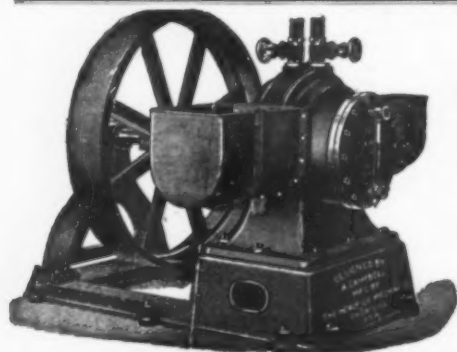
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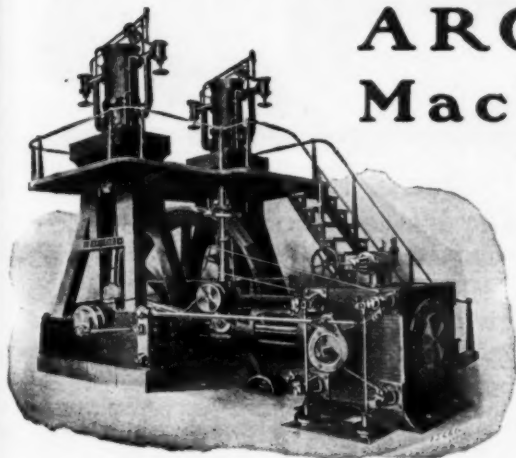
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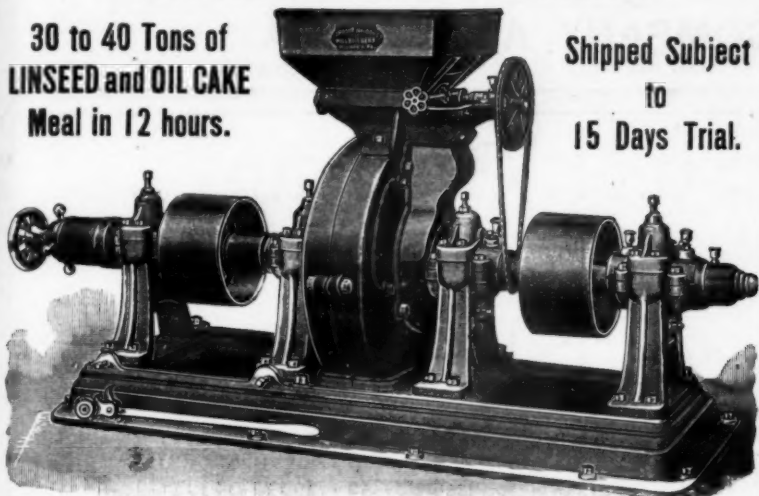
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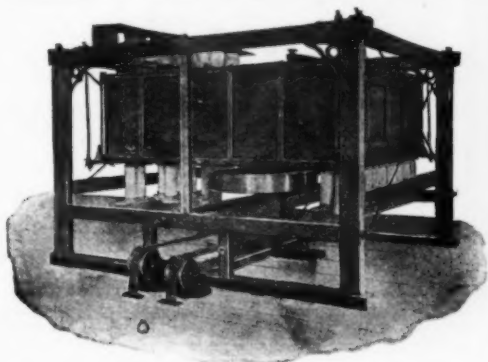
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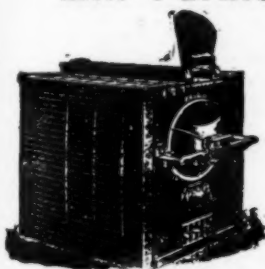
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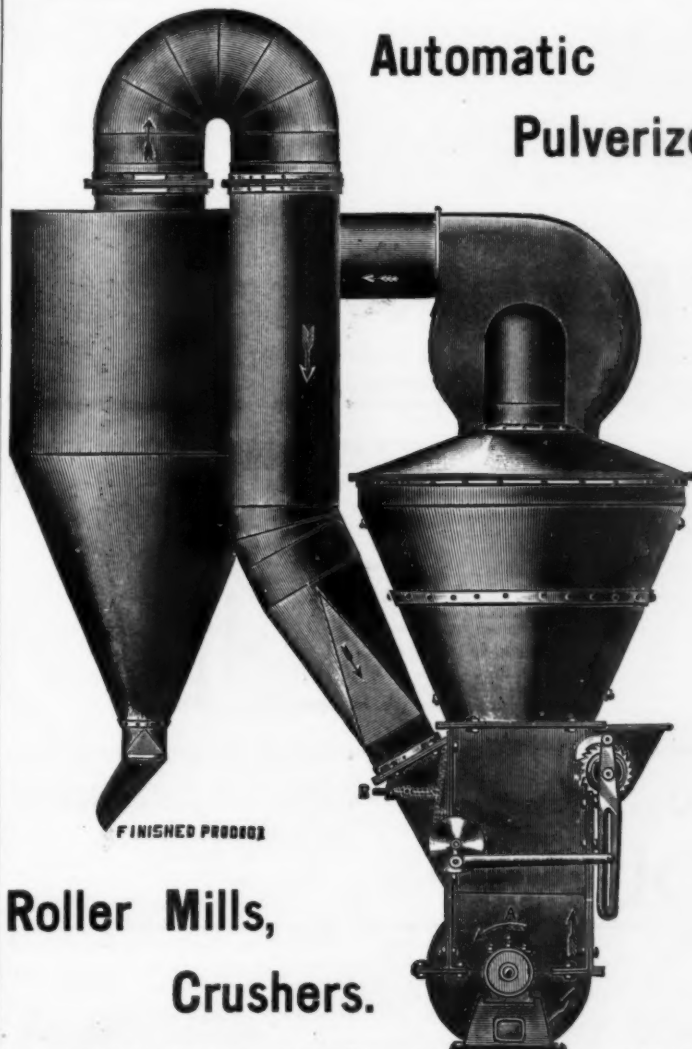
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The Kearsbey & Mattison Co., the owners of the patents for magnesia covering, have commenced a suit in the United States Circuit Court for the Southern District of New York against the Philip Carey Mfg. Co., George D. Crabbs, J. E. Breese, Schoellkopf, Hartford & Hanna Co., J. F. Schoellkopf, Jr., James Hartford, W. W. Hanna, C. P. Hugo Schoellkopf and Jesse W. Starr to restrain the defendants from making and selling magnesia covering for boilers and steam pipes containing more than 50 per cent. of magnesia, and especially coverings containing 85 per cent. of magnesia.

The bill prays for a preliminary writ of injunction, to be continued during the pendency of the suit, and upon the final determination thereof to be made perpetual, and also demands an accounting and damages.

All persons are respectfully requested to refrain from purchasing covering infringing these patents, as such purchasing must of necessity lead to suit. Beware of Fraudulent so-called "Magnesia" Coverings as well as those infringing on patents.

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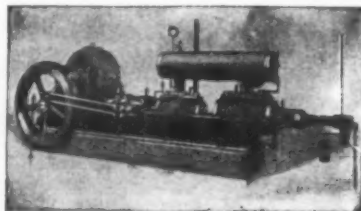
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A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER.

VOL. XL. No. 2.
WEEKLY.

BALTIMORE, AUGUST 1, 1901.

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Manufacturers' Record.

RICHARD H. EDMONDS, President.
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BALTIMORE.

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RICHARD H. EDMONDS,
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BALTIMORE, AUGUST 1, 1901.

COPY FOR ADVERTISEMENTS.

Advertising copy (changes or new advertisements) should reach us Saturday Morning to insure insertion in the issue of the following week.

For the first issue in the month we should receive copy by Friday Morning of the week preceding.

Pig-Iron Production for Six Months.

The production of pig-iron for the first half of 1901 reached the highest figures for any six months in the history of the iron trade of the country, although the gain over the corresponding period of 1900 was only 32,000 tons. Compared with the second half of 1900 there was a gain of 1,500,000 tons, the production for the second half of 1900 being 6,146,673 tons, against 7,642,569 tons for the first half of that year. The Bulletin of the American Steel and Iron Association giving the official report of the production of pig-iron by States shows the figures for the first half of 1900 and for the same period of the present year in gross tons of 2240 pounds as follows:

	First half 1900.	First half 1901.
Massachusetts.....	1,554	1,952
Connecticut.....	5,179	4,621
New York.....	193,460	109,317
New Jersey.....	101,074	65,524
Pennsylvania.....	3,493,842	3,549,148
Maryland.....	153,667	157,628
Virginia.....	272,749	217,819
North Carolina.....	14,171	15,547
Georgia.....	605,977	627,214
Alabama.....	7,662	1,320
Texas.....	90,358	74,630
West Virginia.....	45,757	26,361
Kentucky.....	187,694	178,244
Tennessee.....	1,464,208	1,598,550
Ohio.....	712,473	739,409
Illinois.....	79,262	93,981
Michigan.....	128,547	124,273
Wisconsin.....	84,935	88,775
Minnesota.....		
Missouri.....		
Colorado.....		
Total.....	7,642,569	7,674,613

It will be noted that while Maryland made an increase of 4000 tons, North Carolina and Georgia 1400 tons and Alabama 21,000 tons, there was a very considerable decrease in other Southern States, showing a net decrease for the whole South. While New York and New Jersey show a large decrease, Ohio exhibits an increase of 130,000 tons, Pennsylvania 56,000 tons and Illinois 27,000 tons. The South is not holding its own at present in the development of its iron and steel trade, but it is to be hoped that with the general advance of the industrial interests of that section, now so pronounced, the

iron and steel business may move forward more rapidly than heretofore.

Backing Up the Railroad.

It is hoped that the difficulty met by the Illinois Central Railroad Co. in carrying out its plans for terminal improvements may be speedily overcome, and that the hostility against them which has cropped out in the city council may be allayed. However that may be, the expressions of friendliness for the railroad company and of appreciation of the work it has already done for New Orleans are exceedingly gratifying to everybody concerned with the welfare of that city and of any other community of the South dependent for its progress upon railway enterprise. For example, viewing as antagonistic to the best interests of the city the changes made in an ordinance before the city council originally intended to facilitate contemplated improvements of the railroad company, the Times-Democrat said:

In consideration of the tremendous business done by the Illinois Central Railway at this port, and in consideration also of the liberal manner in which that corporation has in more ways than one contributed to the permanent growth, development and enrichment of New Orleans, it seemed incredible that men of sound business sense, charged with safeguarding the public interests, should, in amending the original ordinance, have insisted upon conditions which, as everyone understood, could result only in turning one of the best customers New Orleans has away from her door.

The moment these unreasonable conditions were incorporated in the ordinance it became evident that the Illinois Central Railway had been notified by the city council that the far-reaching influence for good of that corporation was no longer to be sought or even desired in advancing the interests of this community.

In the whole history of this municipality it is difficult to recall an instance in which enlightened public sentiment has been so heedlessly disregarded as in the position taken and maintained on this subject by certain members of the city council. Their action is equivalent to shouting from the housetops that persons and corporations who come to New Orleans to obey the laws and to aid in the general development are to have the gates of the city slammed in their faces. To all men who employ labor in large number and who increase the circulation of money, these members of the city council cry, "Keep out!"

When, in the course of the controversy, it became evident that the railroad company would be obliged to make the improvements elsewhere in case of the failure of New Orleans to accommodate it, the Times-Democrat said:

It is a mere commonplace to say that the execution of this purpose of the Illinois Central Railway would be a distinct calamity to this community. In the growth and development of this port it is certainly clear that no mean contribution has been made by the Illinois Central Railway system. The enormous business which that corporation has handled at its southern terminus has brought to this city men of character, energy and intelligence, as well as money in large amounts, and by bringing both has highly advanced the interests of New Orleans.

It would be indeed unfortunate for the people of this community if they failed to recognize that the spirit which has compelled the Illinois Central Railway to take this step is inconsistent with the progressive tendencies so notable in New Orleans in the last five

years, and will check the wise development of this port along liberal lines.

Of similar import was an editorial of The States based upon the possibility that a new ordinance would be introduced meeting the exigencies of the case. It said:

Unreasonable opposition to railroads and railroad improvements has worked much injury to New Orleans in the past, and if we are to hold and increase our trade a new and entirely different policy must be adopted. We must realize that rival ports are eager to give railroads privileges which we stubbornly refuse to grant. In the past railways building into the city have been antagonized in their efforts to secure terminal facilities which were far from being adequate to the needs of their business. The Louisville & Nashville met with discouragement after discouragement, and was finally compelled to establish tidewater terminals at Pensacola and Mobile, where the bulk of its export business is now handled. The experience of the Texas & Pacific has not been more pleasant, and being refused facilities in the city, established a terminal at Westwego. It is not difficult to understand that this anti-railroad policy has not made for the good or the greatness of this city, and the wonder is that the city has not suffered more than it has from such a stupid policy.

There is much reason to believe, however, that the people of New Orleans have made up their minds to turn over a new leaf in their book, and in the future will cheerfully aid and encourage railroads and other corporations seeking to extend the trade and advance the growth of the city. Therefore, it is to be hoped that a start on the new line of action will be made by the city council granting the wharf privileges the Illinois Central desires and must have to increase its export and import business.

This episode is valuable as indicating a very healthy public sentiment at New Orleans, and at the same time as eliciting expressions of a broad-minded spirit which, properly cultivated, will mean much for Southern advancement. With two such papers as the Times-Democrat and The States furthering the legitimate desires of the Illinois Central Railroad Co., which has already done so much for New Orleans, the progressive business men of that city ought to be able to impress upon its lawmakers truths valuable wherever they may become effective.

Charleston's Good Fortune.

One of the most gratifying of recent announcements in connection with the Charleston Exposition is that of the selection by the board of directors of Mr. D. A. Tompkins of Charlotte, N. C., as superintendent and manager of the textile exhibit at the exposition next winter. Mr. Tompkins' achievements as a mill builder, as a successful promoter of the textile industry and as an expert authority upon all matters related to it make him pre-eminently the man to bring the greatest success to the department of the exposition which he will direct, and it may be expected that the textile exhibit at Charleston will be the most comprehensive and practically attractive that has every been made in the United States. In their choice of Mr. Tompkins and in his willingness to undertake the task the directors of the exposition have another illustration of the wisdom and good fortune which

have attended their efforts since the inception of their plans.

Southern Textile Labor.

In a speech before the superintendents and managers of Georgia cotton mills at Warm Springs, Col., J. L. Orr of South Carolina is recorded as advocating every advantage for the mental and moral training of the operatives which schools and churches can afford, and, at the same time, opposing interference by legislation in the relations of employers and employees. He suggested that those in control of the mills should determine to eliminate as best they may young children from work in the mills, but be contented for voluntary action in this direction, instead of compulsory, under the dictation of demagogues, aimed at one industry alone. He said:

I have no expectation of driving Old England or New England out of the business, for they have skill, experience, brains and money, and their prosperity, I might almost say their existence, depends upon this branch of industry, and they will continue to make both goods and money. But I do insist that we shall be allowed to work out our own destiny in our own way, without the interference of demagogues, would-be philanthropists and sentimentalists.

Referring to the proposition which sleeps in Congress for an amendment to the Constitution regulating hours of labor, he said:

People engaged on farms, saw-mills, gins, railroads, stores and in all other avocations are permitted to work as long or short hours as they wish; why should we be singled out for regulation and legislative control? The law can prescribe the hours, but not the price; both should be regulated by contract and that all-controlling law of supply and demand.

Massachusetts has fifty-eight hours, her neighbors sixty and other States sixty-six. In the unfortunate condition of the fox whose tail was cut off in the trap, she is trying, by an amendment to the United States Constitution, giving Congress the right to regulate labor, to cut the balance of our tails off, since, like the other fox, she has failed to impress upon us and our legislatures how much more beautiful we would be if our tails were gone. That reminds me of the negro saying, "When fox turns preacher, the goose better not go to night meeting."

Should the resolution get the necessary vote in both branches of Congress it will have to receive the endorsement of three-fourths of the State legislatures, and I shall be very much deceived and disappointed if at least one-third the States have not sense enough to save their brushes.

Several of my friends in New England have told me that one of the principal reasons which induced them and their friends to invest money in the cotton mills in the South instead of at home was the fact that our States were entirely free from labor laws, and that they felt that the officers selected by the stockholders would run the mills without the hindrance of "walking delegates" or the interference of the legislators. Let them not be disappointed in us, for they are helping us build up our waste places, and when the fruition of our hopes and aspirations shall have been accomplished we will gladly share with them our prosperity. * * *

In connection with this subject should be considered a letter to the Raleigh Post from Mr. John P. Leach, Jr., of Henderson, N. C. He attended for two years the Lowell Textile

School and has spent some time in the cotton mills of Massachusetts and North Carolina, and he traces the comparative absence of labor troubles among Southern mill operatives to the fact that they are of the same stock as the employers, understanding one another better, and have more cordial relations than those in Northern mills, where many nations are represented among the workers. He does not decry organization of operatives in each mill to provide for the settlement on a friendly basis of disputes, but he doubts that mill employees are ever benefited by a strike, however free they may be to quit work as they please. He adds:

The mills of the North are feeling the strong competition of the new and well-equipped Southern mills, and it is but natural that they should adopt some means, fair or unfair, to meet this competition. The Southern mill operatives should stand side by side with the mill owner and together fight the battle that will surely reap a good harvest for them and their section.

That is a point that the Manufacturers' Record has made from time to time. Frequently the suspicion is quite strong that labor troubles in the South have been instigated directly or indirectly not by the laboring men in other sections, but by the employing class as a means of crippling competition. It has been seen in coal-mining notably, and there is reason to believe that the cotton-mill industry has not been exempt. There is no need for antagonism either among the employing class or the employed North or South. Being in sympathy with both classes in the North for the mills which have come to them through shortsighted agitation, the mill owners and the operatives of the South will be wise in maintaining their harmonious relations as against suggestions from the outside likely to result in friction.

A Knockout Criticism

Some of our contemporaries who have not enjoyed opportunities equal to ours for studying the career of the so-called Southern Industrial Association are nevertheless beginning to understand why the Manufacturers' Record is not enthusiastic in support of that undertaking, with its frequent and unnecessary alleged conventions. The latest to join the ranks of critics is the Southern Industrial and Lumber Review of Houston, Texas. In its latest issue it published an editorial, cleverly framed, as a rebuke to the Manufacturers' Record for calling the Philadelphia meeting a fizzle. The cleverness consists in making the purported rebuke the medium for as complete a demonstration of the uselessness of the so-called Southern Industrial Association and its conventions as anyone could desire. The sentences in which this demonstration is made are skillfully interwoven through the body of the editorial, and though they go in some particulars further than the Manufacturers' Record has done, they are, perhaps, worthy of reproduction. Alluding to the representative citizens of the South who attended the Philadelphia meeting, the Review is unkind enough to say:

Mixed in among them were mountebanks, agitators and loud-mouthed promoters, who did a great deal of the talking, perhaps.

The Review does not believe that this mixing detracted from the patriotism of the sound and sensible ones on hand. The Manufacturers' Record fails to see where patriotism was concerned in the matter, unless the Review was in earnest when it wrote "that

Southerners were on the other side of Dixon's line with no hatchets up their sleeves nor stale animosity in their hearts." This, however, must have been jocular. The Review was undoubtedly in earnest in phrasing the following:

Possibly the convention accomplished nothing, that is, nothing specific and permanent. Conventions rarely do.

The Review criticised the work of the Southern Industrial Association at its New Orleans meeting last December as being of too general, too promiscuous a nature. It advocated everything, opposed nothing. Its proceedings were enthusiastic, not deliberative. This, perhaps, was the fault at the Philadelphia meeting. No real work accomplished, no great impressions left upon Congress, for no one thing was sought to be accomplished.

When it comes down to cold business facts, the Northern man, in common with his astute brother in the South, will be found making his own investments, based upon his own judgment, without a particle of enthusiasm or sentiment, and, for that matter, none is desired or required.

Why, then, should there be love feasts, "pure and simple?" Why the flum-flummery of intersectional conventions twenty years behind the times? But the Review is ostensibly rather more optimistic than the Manufacturers' Record. It still pretends to hope for the success of the convention idea in the South, in spite of fifty years' record of inutility, but it demands a reform. It says:

Every speaker should be compelled to keep to the point, and thus much wind would be forestalled. Delegates must go to the place of meeting with an eye alone to business; the excursion part of it should be eliminated. The elaborate preparations of cities to entertain crowds which never come should be abandoned. Every delegate should rely upon his own resources for entertainment as upon his personal merits before the convention. Only in this way will sensible business meetings of business men be convened.

These suggestions are eminently wise, provided any great number of business men may be persuaded to leave their business for the purpose of talking. This the Manufacturers' Record does not believe will ever occur.

Mills in Cotton Fields.

"Some of the Late Industrial Enterprises Financed by Texas People to Manufacture Home-Grown Cotton Into Finished Goods at Home" is the inspiring title of an article in the Galveston News devoted to a description of cotton mills recently erected at West, Itasca, Belton and Bonham. The building at West is practically completed, and the plant, finished and equipped, cost \$125,000. The mill has 4100 spindles and 240 looms and will employ about 225 persons. Its output will be three and four-yard sheetings. It was built with home capital, and more than half the stock is owned by neighboring farmers. The machinery of the Itasca Cotton Mill, equipped with 5000 spindles and 200 looms to manufacture three-yard sheeting, was installed early last month and operations will begin at the commencement of the cotton season. The Belton Cotton Mill, equipped with 3200 spindles and 100 looms, will be ready for operation about September 15, and will make at first four-yard sheeting. The building has been so planned as to permit of enlarging its capacity, probably next year. The subscription list for the Bonham Mill was opened about fifteen months ago and the \$100,000 necessary was soon raised. The mill has been operating for some time and sufficient cotton is on hand to carry it through the season. These mills were a result of the campaign for the manu-

facture of cotton at the point of production of the staple, which was promoted by the remarkable success in recent years of the mills in the Piedmont region of the South. They are comparatively small, but are capable of extending their operations, and, carried on conservatively, will do much toward increasing the practical interest of Texans in this great industry.

Education for the People.

In an address before the Alumni Association of the University of Tennessee Col. Harvey H. Hannah made a strong plea for the encouragement of all corporate industries that can help the development of Tennessee. He said:

We should learn a lesson from the experience of other States, and never forget the fact that capital is dependent upon labor, and that labor is dependent upon capital, and upon their mutual friendship and fellowship depends the success and happiness of both. We need more railroads in Tennessee to transport the products of our mines and farms and factories. The prejudices which existed in the past between the people and the railroads are fast dying out. The people need the railroads and the railroads need the people, and out of the mutual necessity should grow the kindest relations. All the industries of every class and kind and all the people should join fraternal hands and lend every energy to upbuild and make great the State, remembering that the foundation for its greatness must be in the education of the masses.

So the good work goes on. Not the least important phase of education of the masses is the training of them to recognize the truth set forth by Colonel Hannah. All the book learning in the world is worthless if it prevents men from thinking for themselves or from acquiring the ability to escape the snares and wiles of the demagogue, who has even made use of the so-called education to further his selfish ends. One railroad line 100 miles long, supplying transportation facilities to agriculture, manufactures and commerce, is worth more than 1000 politicians, however honest they may be in their personal conduct.

Something Wrong Here.

Under date of July 11 F. J. Thompson, secretary of the Chamber of Commerce of Huntsville, Ala., wrote to the Manufacturers' Record as follows:

You can discontinue sending the Manufacturers' Record to the Huntsville Chamber of Commerce, as I am not authorized to renew the subscription for same.

Under date of July 27 Mr. R. E. Pettus, president of the Chamber of Commerce of Huntsville, Ala., wrote to the Manufacturers' Record as follows:

Your marked copy of this week's Manufacturers' Record was duly received and appreciated. We note with pleasure you mention Huntsville in five separate paragraphs. Your continued kind reference to our industrial development is most gratefully acknowledged. We know of no more potent factor for the dissemination of reliable information than the Manufacturers' Record is today, and it is remarkable how very accurate are its powers of discrimination between the true and the false.

We appreciate the kind words of President Pettus, and we shall endeavor to continue to discriminate between the true and the false influences in Southern industrial development. But we suggest that the letter of Secretary Thompson indicates that he is hardly in touch with other officers of the Huntsville Chamber of Commerce.

Last year the assessed valuation of property in Polk county, Georgia, increased \$555,973 over that of the preceding year. Eight of the twelve districts of the county show an increase

this year of \$341,583. Of this the increase in the Cedartown district is \$275,592. Cedartown district does things.

EMPLOYERS AND EMPLOYEES.

President Samuel Spencer's Letter Regarding the Relations.

In reply to a communication of representatives of Charleston business associations touching the strike of machinists of the Southern Railway Co., President Samuel Spencer of that company has written a letter which discusses so admirably the question of the relation of employers and employees to each other and to outside parties that it is reproduced as follows:

"The question which you present of an appointment with a new committee of the machinists formerly in the employ of the company has already been presented by another friend, actuated by the same laudable motives as yourselves, and in responding to your kind suggestion I cannot do better than to practically reproduce what was said to him.

"In order to deal with the subject properly, a brief review of the situation is necessary.

"On May 27 last a committee of machinists, then in the employ of the company at the several shops, met Mr. Gannon, the general manager, at his office in Washington by appointment and presented a typewritten petition which had been previously presented to the master mechanics and the superintendents, asking that the working hours in the shops be made nine hours per day, with ten hours' pay; that certain rules in respect to overtime be adopted; that a prescribed limit be placed upon the number of apprentices employed, and that other specified rules and regulations with regard to the operation of the shops be put in force by the company.

"After a general discussion of more than two hours the delegation informed Mr. Gannon that it had no 'authority' to accept anything except the provisions of the petition as presented.

"Many of these provisions were such that they could not reasonably be acceded to, and the reasons were stated.

"The petition had not been drawn by the employees of the company, and the questions involved had never been previously discussed on their merits, between the officers of the company and those employees.

"It was drawn by outside parties and submitted as an ultimatum, the employees avowing in presenting it that they had no 'authority' to act outside of its terms.

"The issue was thus clearly drawn: Should the rates of pay and hours of work, the relative number of employees of a special class to be employed, and other rules and regulations for the company's shops be dictated by an outside authority, or should the company control its business in these respects?

"To this, of course, there could be but one answer.

"All subjects of mutual interests are proper ones for discussion and reasonable adjustment between the company and its employees, but the company cannot accept, for the conduct of its business in any department, rules and regulations laid down arbitrarily by anyone.

"It has always met its employees of all classes in fair discussion of any question which might reasonably arise between them, and it was ready in this case to take up such discussion. Equitable and satisfactory adjustments have on many occasions been made with the employees, including the machinists, after such conferences.

"After the close of the conference, and in order that the employes at all of the shops should be fully acquainted with all that had transpired, the proceedings of the meeting, which had been reported stenographically, were printed and distributed in pamphlet form as promptly as possible. In the meantime advices were sent to the several master mechanics and superintendents that such report would be sent as soon as it could be printed, and the shop men were urged, by circular dated May 28, to await its receipt and to avoid all hasty action, and the assurance was added that if, after reading the proceedings, they considered another meeting with the general manager desirable, one would be arranged for.

"This advice was unheeded, and, apparently under instructions from authority outside of the company's service, the men struck on or about May 30, without waiting to receive the report of the proceedings, and ignoring the invitation for a second conference.

"The company, desiring still to befriend its employes and protect them against the unfortunate consequences of the bad advice which they were following, promptly issued notices, dated May 31 and June 1, which were posted at all of the shops, cautioning the men against the unwisdom of their course, and allowing them to return to work without prejudice on Monday morning, June 3, but cautioning them that if they failed so to do they could no longer be regarded as employes of the company, and their places would be filled.

"This advice and caution was also disregarded, and, I am afraid, was misunderstood and possibly misconstrued by many.

"This is the situation today, except that the places of over 70 per cent. of those who thus voluntarily left the service have been filled.

"The men who have taken these places are now the employes of the company, and they are entitled in good faith to the same consideration accorded to all other employes, of preference in continuance of service as long as they so desire, and so long as their services are satisfactory.

"It would be unfair and unwise for the company to now take up for discussion any question which involved the displacement of any of these men, who have voluntarily enter the service and who desire to remain, in favor of others who voluntarily left it for reasons which were apparently then satisfactory to them.

"Under these circumstances, I do not see how anything material can be accomplished by a meeting of the committee to which you refer. The reinstatement of the men who have left the service is now impracticable. There are less than 30 per cent. of vacancies, and it is doubtful whether, at this season, the company desires to increase the shop forces up to the point at which they stood prior to the strike.

"The shops were running very full at that time under a general understanding previously reached with the machinists and others, that as nearly as possible regular employment would be given the year round, instead of varying the forces in proportion to the activity of business during the different months of the year.

"However, it is the desire of the company to give courteous attention to all questions presented, and if the committee to which you refer shall be appointed, and desires to communicate with any of our officers, I suggest, in order to avoid misunderstandings, that the communication shall be in writing, stating exactly what the committee desires to present for consideration.

"I enclose you herewith a copy of the pamphlet containing the proceedings of

the meeting of May 27 between Mr. Gan-non and the committee, and also copies of the posted notices of May 28, May 31 and June 1, herein referred to.

"I assure you that the spirit in which your letter is written is fully appreciated, and no one regrets more than I do the unfortunate position in which the former employes of the company have allowed themselves to be placed, and from which, as you will see, this company tried to save them."

POLITICS AND DEVELOPMENT.

Their Intimate Relation in Present Southern Conditions.

[New York Journal of Commerce, July 29.]

When the democracy of South Carolina repudiates Senator McLaurin and calls for his definite withdrawal from the party, the conviction is irresistible that the democracy of South Carolina is hostile to the material development of its State. If its views are those of the majority of Southern democrats, it must be equally plain that the industrial and commercial progress of the South will be retarded while the democratic party continues to be the dominant political force. Senator McLaurin has advocated a policy in respect of steamship subsidies and protective duties which might properly be denounced as undemocratic, but it is not for this that he is condemned by the State executive committee. Bryanism is still the accepted creed of democracy in South Carolina, and Mr. McLaurin has been vigorously and consistently opposed to Bryanism and all it represents. In the words of the resolution adopted by the executive committee, he has by his affiliations and votes in Congress "ignored the national democratic platform." It is the testimony of Mr. Edmonds, the editor of the Manufacturers' Record, and one of the most enthusiastic exponents of the industrial potentialities of the South, that its progress has unquestionably been retarded by the unwise efforts made to jamper and restrict capital in the development of its railroads and industrial interests, and by the free-silver craze, which for several years almost completely halted its material development. Progressive newspapers in different parts of the South have hailed with satisfaction the tacit repudiation of Bryanism by the Ohio democracy. They have perceived that the free-silver issue is dead, and that imperialism is a bogey which has frightened nobody. Mr. Bryan stands where he did in maintaining that the free coinage of silver at the ratio of 16 to 1 is a democratic principle, and that the condemnation of the policy of the administration in dealing with the new possessions of the republic is a vital issue for the democratic party. That is apparently the conviction of the democracy of South Carolina, and it is because Senator McLaurin refused to accept any such theory of political obligation that his unqualified resignation from the party is demanded.

Mr. Edmonds reminds his Southern friends that if they fritter away their time with trifles or with crossroad politics they will lose the substance while grabbing for the shadow. Considering the enormous undeveloped resources of the South—the wealth that is ready to be created at the touch of energy and enterprise—it is a question of vital importance for the rest of the country whether the blight of Bryanism is to be permitted to rest upon Southern progress. The editor of the Manufacturers' Record may be a little over-sanguine in his generalization that the South has agricultural capabilities sufficient to enable it to duplicate, and something more, the entire agricul-

tural products of the United States. The statistician of the Department of Agriculture does not by any means sustain that statement, and gives good grounds for his skepticism in regard to any such expectation. Mr. Edmonds is on surer ground when he recalls the fact that in the great stretch of mountain country which runs from Wheeling to Birmingham there is forty times as much coal as Great Britain had before she stuck the first pick in the ground. West Virginia alone has 16,000 square miles of coal, as compared with Great Britain's 12,000. The South has nearly one-half the standing timber of the United States. It holds a practical monopoly of the production of cotton, furnishing three-fourths of all the staple required for the 100,000,000 spindles in the world. It has almost a monopoly of the phosphate rock which is the foundation of the fertilizer business both in this country and in Europe, and now the Gulf and Atlantic coasts have in Texas a fuel supply calculated to meet any possible demand of industrial progress.

In spite of the circumstances that have operated to discourage the investment of capital in the South, its cotton mills represented in 1900 a money value of \$150,000,000, against \$61,000,000 ten years earlier. The consumption of cotton in these mills was 1,597,112 bales, against 516,894 in 1890. The number of spindles employed was 6,200,000, against 1,712,930 in 1890. The railroad mileage in the South has increased in these same ten years from 42,825 to 53,000 miles, the amount of coal mined has increased from 21,500,000 to 48,192,053 tons, and the amount of pig-iron produced from 1,953,450 to 2,604,671 tons. The same ten years saw an increase in the value of the agricultural products of the South from \$666,000,000 to \$1,200,000,000, and in the value of exports from Southern ports from \$315,021,008 to \$530,317,545. There can be no doubt that this rate of progress would have been very much more rapid but for the reactionary policy of the democratic managers of the South. All forms of progress have been discouraged by the tactics of men like Tillman and their blind and bigoted followers in South Carolina and elsewhere. What possible gain can come to the party by the exclusion from its councils of a man who has dared to differ from those who were apparently bent on compassing its ruin is not at all obvious. One thing must be plain to the men who have capital invested in Southern enterprises and who have a vital interest in Southern prosperity, and that is, that if the Tillman theory of political action is to prevail throughout the South, it will continue to lag behind the rest of the country, and much of the progress of the last twenty years will be neutralized. Senator McLaurin's offense in ignoring the national democratic platform has been imitated by the Ohio democrats with the apparent approval of all that is progressive in the democratic party throughout the country. Convention after convention, in the North at least, is very likely to follow the example of Ohio, and if the Southern democrats propose to go on endorsing Bryanism and the Kansas City platform, the party will shortly be reduced to the condition of the old Whig party in 1855. Mr. Bryan's attempt to give an exaggerated importance to the issue of imperialism is hardly calculated to make his type of democracy any more palatable to the people of the United States. It would appear as if the South had everything to gain by the expansion of foreign markets and the growth of foreign trade which are likely to accompany the enlargement of the bounds of the national domain.

There certainly can be no possible damage done to any important Southern interest by the development of the Philippines through the agency of American enterprise and its government under the restraints of American law. That there can be any latent danger to the liberties of American citizens in the work we have to do in the Philippines or elsewhere toward the elevation of inferior races is too palpable an absurdity to impose on anybody, and can hardly be seriously believed by the most blatant of its Southern exponents.

ENLARGING ITS SCOPE.

Improvements at the Maryland Steel Co.'s Works.

In the recent reorganization of the Pennsylvania Steel Co., of which the Maryland Steel Co. at Sparrow's Point is a part, plans were completed and the money provided for very extensive improvements to be made to the Sparrow's Point works. It is understood that these improvements and enlargements look to the expenditure of about \$4,000,000. The Manufacturers' Record is authoritatively informed that, as recently announced in the papers, the first improvement to be undertaken will be the construction of a plant of by-product coke ovens, estimated to cost about \$750,000, and to have an output of from 1000 to 1200 tons of coke per day. There are four furnaces, each of 250 tons daily capacity, at Sparrow's Point, the coke for which has been brought from Connellsville and adjacent districts, a distance of 300 to 400 miles. It is now proposed to reduce the cost of this coke by the establishment of this extensive coke-making plant, which, saving the by-products, will lessen the net cost of the coke to the works. A portion of the gas generated from the oven plant will, it is understood, be utilized as fuel for the works, while it is also reported that illuminating gas will be produced.

The construction of these coke ovens, the first of the extensive improvements to be undertaken, will probably be followed by additional industries. There will also be a considerable increase in the number of hands employed at Sparrow's Point, and work has begun upon about 150 houses, which are to be completed as soon as possible.

Controlling, as it now does, what is regarded as practically an unlimited supply of high-grade ores in Cuba, the Maryland Steel Co., with these extensive improvements, will be even better prepared than in the past to compete in the world's markets for the steel-rail trade, for shipbuilding and other lines of work covered in its operations.

Mr. R. M. Glacken, chemist, of Baltimore, in discussing the ovens to be built by the Maryland Steel Co. and their output, gives the following details:

"The ovens are built on steel columns sufficiently high above ground to discharge the coke into tram cars by force of gravity. The loading and unloading of the ovens is done by electrical transferring machinery, the ovens being filled at the top and emptied from the end. Heated by gas introduced through flues along the bottom and sides, the coal thus treated gives off its volatile matter in the form of gas for fuel and illuminating. The fuel gas can be used in the ovens or in other portions of the plant, and the illuminating gas piped to a convenient point for storage. Other by-products include ammonia, collected usually by absorption in sulphuric acid and used as a fertilizer basis; coal tar, from which benzole and aniline dyes are manufactured, as well as phenol, carbolic acid, smokeless gunpowder, anthracene and the alizarine

dyes, and creosote. If all of these products are saved, as is possible in the by-product ovens, it is estimated that their aggregate value represents 70 per cent. of the coal proper, saying nothing of the value of the coke.

"Tests made at the plants of the New England Gas & Coke Co. of Boston with by-product ovens show that the capacity of the 400 ovens is twenty-five tons of sulphate of ammonia daily, valued at \$63 per ton; yet this is merely one of the products. By the use of these ovens 448 pounds of coal can be resolved into 315 pounds of coke, two and one-quarter gallons of coal tar and 1000 cubic feet of illuminating gas of a standard of eighteen candle-power—sufficiently high for the illuminating of dwellings and buildings. Consequently, the plant at Sparrow's Point will have a capacity for producing about 6,000,000 cubic feet of illuminating gas daily."

LOUISIANA ROCK SALT.

Difficulties of Mining It Through Quicksand Overcome.

According to the New Orleans States, the practicability of mining salt through quicksand has been demonstrated on Weeks Island, in Iberia parish, and the success of the undertaking opens up a great industrial possibility for Louisiana. For more than two years efforts have been made to reach the salt through the quicksand, and now the difficulties have been overcome by the Myles Salt Co. by sinking a caisson and the application of other methods described as follows by The States:

"The process by which the caisson for the shaft was sunk and secured is interesting in many ways. The caisson is composed of circular steel bands some eighteen inches in height, and as one is sunk another is riveted to it, with pitch paper between to make it airtight, the earth being taken out as the caisson sinks down. It took forty-three feet of this sinking and mining to reach the quicksand, when the water was forced back by the application of compressed air, the caisson in the meanwhile having been capped by an airlock. The pressure at the distance below the surface was from eighteen to twenty pounds per square inch, so a very powerful pressure was necessary to keep the shaft clear of water, but this was done, and passing through a stratum of clay overlying the salt stratum, the base of the caisson finally rested on the salt bed and was sunk some feet further into it. Below that the salt was penetrated, and a wooden caisson, running from the water line fifty feet above, to a present depth of ninety-three feet below the surface, was put in, and then the process of cementation began. First the rock salt was smoothed off and cut in, when it was heated to an intense heat by the flames from compressed-air blow-pipes, and the cement, consisting of pitch and asphalt, was poured over, filling up the interstices and sticking to every crack and cranny. Over this was laid a covering of cement, the whole not only securing the caisson, but making it absolutely air and water tight and permitting the uninterrupted work of the miners.

"But the mining will not stop at this depth of ninety-three feet. Instead it will be sunk to a depth of 300 to 400 feet, while tunnels will be run out and big chambers be blasted and mined and the pure rock salt brought to the surface for distribution all over the United States and Canada. For this purpose the Southern Pacific Railroad Co. has already begun the construction of a spur some three miles out from its main line, and

will have the work completed within the next three or four months.

"It is needless to say that the members of the company are much gratified over the success of the undertaking, and will begin to reap a big reward for the patience and persistency with which they have stuck to what at one time seemed a hopeless task.

"By the sinking of rods at various points surrounding the shaft it has been ascertained that the salt strata is a mile or more in width, while the bottom has never been reached, affording what is practically an inexhaustible supply of the finest salt in the world."

Salt in Texas.

The Palestine Coal & Mining Co. of Palestine, Texas, in a letter to the Manufacturers' Record says:

"We have a tract of land containing over 100 acres called 'The Saline,' situated about five miles west of this city and that distance from the nearest railroad. It has been known for many years that abundance of salt deposits or rock salt exists on this Saline, and before and during the war considerable salt was made by kettle-boiling, which supplied this and adjoining county. During the past six months we have bored two six-inch wells about 200 feet deep, which went through very extensive stratas of rock salt and salt brine, which we have tested pretty thoroughly, and the brine shows from 90 to 100 per cent. under the hydrometer. There is plenty of fresh water to be had for the purpose of pumping into the wells if necessary, but so far the pure brine seems to be inexhaustible without pumping in fresh water. Our purpose is to get about a 1000-barrel per day plant to make up the salt. Located about one mile from the above-named Saline we have extensive fields of lignite coal of a good quality for fuel, which is also under our control, and which we propose to use as fuel for the salt-making plant. In using this fuel we will have a great advantage over any other salt works in the South or West, as it will cost us only about sixty-five cents per ton. Of course, with a good plant a railroad will simply be indispensable to the plant and coal mines, but we are very confident of having a short line built out there just as soon as we can make a favorable showing to the management of the railroad company at this place."

Petroleum in Alabama.

In a letter to the Manufacturers' Record Mr. R. E. Pettus, president of the Chamber of Commerce of Huntsville, Ala., writes:

"Our State geologist, Dr. Eugene A. Smith of the University of Alabama, has just published a card in answer to the volume of inquiries he is now receiving concerning oil in this section. He makes a statement of some of the conditions surrounding the oil districts in different parts of the country, together with such inferences as may be legitimately made from known facts. In speaking of the Pennsylvania-West Virginia-Ohio region, where oil occurs, he says: 'The best known of these great anticlinal folds is one that passes through the city of Cincinnati and extends southwestward through Kentucky and Tennessee into Alabama, where its extreme limit reaches into the counties of Lauderdale, Limestone, Madison, Morgan, Lawrence and Colbert.' Hence the great excitement that now prevails in these counties. Companies for boring are being organized in almost every hamlet. We have known for a long time that oil exists here, but whether it is in paying quantities is yet to be found out. With our

manufacturing enterprises rapidly increasing and the discovery of oil in this section we cannot prophesy what our advancement may be within the next few years."

Oil on the Southern Pacific.

The tanks for fuel oil to be used by the Southern Pacific Railroad Co. for its locomotives will have a capacity of 1,250,000 gallons each. They are to be constructed at Houston and Beaumont, Texas, Lafayette and Algiers, La. It is also stated that the company is boring for oil on property it owns near Beaumont with the view of supplying its own needs. Incidentally it may be stated that the demand for tank cars for transporting oil is such that a number of orders have recently been given to Northern rolling-stock companies by the Southern Pacific and other companies to be filled as soon as possible.

The Pig-Iron Market.

Matthew Addy & Co. of Cincinnati in their weekly letter say:

"July has proved to be an exceedingly satisfactory month. It promised well at the start, but as by all precedents it should have been dull, there was continued surprise over the steadiness of the buying and the demand. It is to be doubted if anyone in the trade really seriously believed that the month would turn out so well. There has been a heavy tonnage of new business placed on furnace order-books. There has also been no diminution of shipments except where the weather has temporarily interfered, and all the visible signs point to a consumption of pig-iron surpassing all records. No consumer is accumulating pig-iron. On the contrary, in the majority of cases the ironmasters have difficulty in shipping it out as fast as it is needed. As yet the crop indications are too uncertain to affect the large number of manufacturers who depend directly or indirectly on the farmer for their market, and they are still working to their full capacity. The later reports regarding corn show that the first news of damage was much exaggerated. Of course, the wheat and hay crops were safely harvested before the heat and drought affected them. The machinists' strike came to an end during the month, and that has tended to increase consumption. The immediate prospects are good. There is at the present time an active demand and a steady day-to-day buying. During the preceding week there has been the same kind of buying that marked the earlier weeks of the month. Everything on the list has been purchased, and the round-lot orders have been mixed up with small orders for hurry shipment. The large orders in tonnage greatly exceed the total of the more frequent small orders, though the latter are the backbone of business. Prices have remained unchanged, except that several of the weak sellers have marked their quotations up to the level of the large companies."

West Virginia Minerals.

At the fourth annual session of the International Mining Congress at Boise City, Idaho, was read a paper by Dr. I. C. White, State geologist of West Virginia, on the geological history of that State. Dr. White said that West Virginia possessed no precious stones, gems and metals in paying quantities, but that Nature has so richly endowed her with common stones, minerals and other common things that her natural wealth is unsurpassed by any equal area on the continent. He sketched the main features of West Virginia geology and said:

"West Virginia's mineral wealth con-

sists principally in coal, limestone, building stone, glass sand, clays and iron ore, along with vast supplies of petroleum and natural gas.

"Situated as she is in the center of the great Appalachian coal field, where it is richest, widest and possesses the greatest variety of fuel products, the Little Mountain State is rapidly becoming a manufacturing center. Already she has taken third place in the galaxy of coal-producing States, and bids fair soon to grasp the banner from Illinois and occupy the second place alongside of her sister on the north, Pennsylvania.

"With her vast and virgin resources in timber, clays, building stone, limestone, coal and natural gas, no other State in the Union has a brighter outlook for future growth and development nor a more inviting field for capital to invest in the mining and manufacturing business."

Geology of Georgia.

The interesting and valuable paper on the mineral resources of Georgia, read by Assistant State Geologist S. W. McCallie at the International Mining Congress at Boise City, Idaho, has been printed in pamphlet form, with a map showing the location of the various minerals. In it Professor McCallie says: "All the great divisions of geological history are represented in Georgia with the exception probably of the Jura-trias. The northern and central parts of the State, known as the Crystalline area, are made up largely of gneisses and schists, which are supposed to represent the southern extension of the old Archaean Continent. To the northeast of this ancient land surface, and comprising the greater part of ten counties in the extreme northwestern part of the State, occur the Paleozoic rocks, while to the south, extending over an area of 30,000 square miles, are the widespread deposits of the Cretaceous the Tertiary periods. A State thus endowed with such a diversity of geological formations must necessarily possess extensive and varied mineral resources. In the discussion of these resources, many of which are in a large measure at present in an incipient stage of development, only those will be considered whose economic importance cannot be questioned."

Professor McCallie then sets forth clearly facts about the many minerals of the State, and in conclusion reckons the value of the annual output as follows:

Iron ores.....	\$578,526
Coal.....	450,000
Manganese.....	60,201
Ochre.....	73,085
Bauxite.....	35,274
Asbestos.....	10,300
Marble.....	812,070
Sandstones.....	2,000
Limestone and lime.....	125,000
Cement rock.....	75,000
State.....	33,125
Clays, brick.....	1,062,213
Gold.....	129,245
Soapstone.....	4,054
Graphite.....	12,000
Tripoli.....	500
Sand.....	200,000
Road material and ballast.....	350,000
Mineral waters.....	42,000
Total.....	\$4,824,604

For Telegraph Poles.

W. B. Crossland, manager of the Weatherproof Sectional Pole Co., Box 149, Guthrie, Okla., is looking for an advantageous location for a factory to produce sectional poles for telegraph, telephone and other lines requiring the stringing of wires. Any desirable section where maple, birch, gum and similar timber is plentiful would be especially adapted for the plant.

It is stated that the Texas Midland Railroad Co. has decided to bore for oil at several points on its line, and has ordered the necessary machinery for this purpose.

FOREIGN TRADE.

This department is designed to set forth opportunities for the extension of the trade abroad of American manufacturers, and to record facts about the rapidly-developing commerce of the South.

EXPORTS FROM AMERICA.

Comparison of the Movement During Two Fiscal Years.

Statistics of the United States Treasury Department furnish the following comparison of exports of various classes of domestic products in 1900 and 1901:

Products.	1900.	1901.
Agriculture.....	\$835,858,123	\$944,059,568
Manufactures.....	433,851,756	410,569,173
Mining.....	37,843,742	39,267,647
Forest.....	52,218,112	54,312,830
Fisheries.....	6,326,620	7,743,313
Miscellaneous.....	4,665,218	4,561,278

Total..... \$1,370,763,571 \$1,460,453,809

These figures show that there was an increase in the value of all classes of products except manufactures and miscellaneous. The value of exports of manufactures show an apparent decrease of \$23,342,583 in 1901 from those of 1900. That the decrease is only partly apparent is shown by a study of the advance sheets of the bureau of statistics of the Treasury Department issued this week.

As has already been explained by the bureau of statistics, the export figures of 1901 do not include the exports to the Hawaiian Islands or to Porto Rico, which are now customs districts of the United States. The shipments of domestic products to Porto Rico were during the year \$6,861,917, and including the foreign with the domestic products, exceeded \$7,000,000. For the shipments from the United States to the Hawaiian Islands there are no official statistics, the exporters having taken advantage of the letter of the law and refused to give this information to the bureau of statistics; but the collector of customs at Honolulu estimates the shipments to those islands from the United States during the year at fully \$20,000,000. This makes \$27,000,000, therefore, which should be added to the export statement in an attempt to compare the figures of the present year with those of 1900. An analysis of the exports from the United States to Porto Rico and the Hawaiian Islands last year shows that fully two-thirds were manufactures, and assuming this as a basis of the calculations for the present year, there should be added \$18,000,000 to the statement of manufactures exported from the United States, bringing the total up to \$428,000,000, or only \$5,000,000 below that of last year. The exports to China from the United States fell off about \$5,000,000 in 1901 compared with 1900, the fall, of course, being entirely due to temporary causes. An examination of our exports to China in 1900 shows that practically all are manufactures, so that the temporary reduction of the exports to China due to the unsettled conditions in that country, coupled with the absence of export statistics for Hawaii and Porto Rico, fully equals the entire decrease in our exports of manufactures.

In four important articles of our manufactured exports, however, there is a material reduction in the value of exports in 1901 compared with 1900. These articles are (1) copper, a reduction of \$14,500,000; (2) iron and steel, a decrease of \$4,500,000, which is entirely accounted for by the absence of figures on the exports to Hawaii, to which the exports of iron and steel alone from the United States last year were over \$5,000,000; (3) mineral oils, in which there is a reduction of \$3,800,000 in value, and which is due entirely to a reduction in the export price of oils, the number of gallons exported hav-

ing actually increased from 817,599,499 gallons in 1900 to 870,498,964 gallons in 1901; (4) cotton manufactures, a reduction of \$3,700,000, which is entirely due to the temporary falling off in our exports to China, the decrease in exports of cotton goods to China in 1901, compared with 1900, being \$4,183,000, or more than the entire decrease in total exports of cotton manufactures. Taking the entire available list of exports of manufactures, numbering about 200 distinct articles or classes of articles, it is found that 60 per cent. show an increase in value as compared with last year, while in a considerable number of those showing a decrease the loss is entirely due to the reduction in price per unit, the actual quantities being in several cases greater and the value less than last year.

The following table shows the exports in 1900 and 1901 of all manufactures in which the total exports in 1901 exceeded \$1,500,000:

	1900.	1901.
Iron and steel and mfrs.	\$121,913,548	\$117,319,270
Refined mineral oils....	62,247,588	64,425,859
Copper, manufactures of....	57,582,960	43,267,021
Leather and mfrs. of....	27,293,010	27,923,653
Cotton manufactures....	24,093,087	20,272,418
Agricult. implements....	16,099,149	16,313,434
Chemicals, drugs & dyes....	13,293,610	14,384,448
Wood manufactures....	11,232,838	11,097,042
Paper and mfrs. of....	6,215,833	7,439,001
Scientific instruments....	6,435,766	7,361,231
Paraffin.....	8,602,723	6,857,288
Tobacco manufactures....	6,010,141	5,092,293
Fibers.....	4,441,833	4,302,776
Carriages & horse-cars....	3,694,138	4,210,108
Railway cars.....	2,558,323	4,195,019
Books, maps, etc.....	2,943,435	3,471,243
Spirits, distilled.....	2,278,111	3,054,708
India rubber and gutta percha manufactures....	2,367,788	3,017,253
Musical instruments....	1,958,779	2,780,796
Bicycles.....	3,553,149	2,515,729
Clocks and watches....	1,977,694	2,340,751
Glass and glassware....	1,936,119	2,126,309
Paints and colors....	1,902,367	2,036,343
Brass manufactures....	1,866,727	2,007,450
Starch.....	2,604,362	2,016,865
Sugar, refined.....	1,004,135	2,969,596
Malt liquors.....	2,139,216	1,723,040
Gunpowder and other explosives.....	1,891,604	1,712,102
Marble and stone mfrs....	1,677,169	1,631,314
Soaps.....	1,774,024	1,569,130
Wool manufactures....	1,390,362	1,542,682

Wants Cotton Sheetings.

Samples and prices of cotton sheetings are desired by Claes G. de Peyron, Esq., of No. 1 rue Jemmapes, Marseilles, representing one of the most important importing houses of the Red sea. Bills will be paid against the delivery of documents, and, if satisfactory terms can be made, purchases amounting to 2,000,000 francs (\$386,000) per annum will follow. Writing of this United States Consul Robert P. Skinner at Marseilles says: "Mr. de Peyron is interested in the matter as a broker, his brokerage to be paid by the seller. Prices c. i. f. Aden are required. A rather interesting circumstance in connection with this matter is that Mr. de Peyron has been endeavoring for a number of months to establish an American connection. Although supplied by me with the addresses of several American manufacturers, and prepared himself to furnish the usual guarantees of reliability, he has found all of his correspondents unwilling to assume the responsibility of engaging in this foreign trade direct. One of his correspondents in America states the case for the trade in general in the following language:

"We are in receipt of your favor of the 8th inst., and in response beg to state that we employ no foreign agents. While we are constantly making large shipments to foreign markets, the goods are without exception purchased and paid for here, the business being done through export brokers, or the agents of foreign houses resident in this country, who attend to all details of shipping, exchange, etc. You will therefore understand that we are not organized to do business direct with your markets, and must decline your courteous proposal."

"Other manufacturers with whom Mr. de Peyron might have concluded a profitable arrangement refers him to their selling agents in New York, and as it ap-

pears that groups of mills in certain sections of the country have handed over their selling business to particular brokers or agents in New York, who, in turn, are already allied with other buyers in Europe, they are not free to discuss terms and prices, and the effort of Mr. de Peyron, for the several reasons above indicated, has proved abortive.

"At the risk of seeming presumptuous in venturing to advise those engaged in a branch of business which has made such progress and increased so enormously as that of manufacturing and selling cottons, I submit the foregoing to the consideration of whom it may concern. In this particular instance the contract has formerly been placed by a foreign house located in New York, acting through another house in Europe, which, in turn, operates directly with the purchaser. The effort of Mr. de Peyron is to unite manufacturer and seller, with the payment of a single commission to himself, in lieu of three or four commissions at present paid on the same business, of which only one remains in the United States. The complicated method of exporting cottons from the United States has its counterpart in many other branches of trade, and whether it is to the advantage of our commercial interests, all things considered, to encourage this multiplication of commissions, and the existence of this gulf between manufacturer and consumer, bridged by from one to half a dozen brokers, is a matter for study. While the brokerage system is permanently established in Europe, and to such an extent that buyers and sellers in cities like Marseilles who know each other perfectly well, dare not engage in any transaction without the assistance of a broker who receives a commission from both sides, it is nevertheless recognized in this country that the process is in some respects illogical and expensive."

American Trade With Germany.

Ambassador White of Berlin, under date of July 2, 1901, transmits the following statistics of the foreign trade of Germany from 1891 to 1900, inclusive:

"In 1891 the United States occupied fourth place in the import trade of Germany, with a total of \$108,528,000, being preceded by Great Britain, with \$160,888,000; Austria-Hungary, with \$142,324,000, and Russia, with \$138,040,000. In 1895 the imports into Germany from the United States rose to \$121,618,000, and after that year increased rapidly until in 1900, when they reached the sum of \$266,750,400. The United States thus stands far above any other country in this trade, being followed by Great Britain, with \$199,920,000; Russia, with \$173,740,000; Austria, with \$172,312,000, and France, with \$72,590,000. During this period American imports into Germany have increased more than those of the last-named four countries together. As regards the export trade of Germany, the United States has occupied third place during this whole period. In 1900 the United States imports from Germany were to the value of \$104,482,000; in 1899, \$89,726,000, and in 1898, \$79,492,000. Up to 1898 they showed a tendency to decline, amounting in 1891 to \$84,966,000, and sinking in 1894, under the tariff of 1890, to \$64,498,000, the lowest point reached. The first place in the export trade has been continually held by Great Britain (which is the only large country with which German trade shows larger exports than imports), the second is held by Austria-Hungary and the fourth by Holland, though from 1896 to 1899, inclusive, this was held by Russia, which is now fifth. Within this period—1891-

1900—there have been notable increases in Germany's exports to England (notwithstanding that since 1897 there has been no commercial treaty between these countries), to Belgium, Italy, Sweden and Norway, British India, Australia, China and Denmark. The greatest relative increase has been in the exports to Japan, which have risen from \$3,332,000 in 1891 to \$16,000,000 in 1900."

Coal for the Mediterranean.

The Journal de Commercio of Lisbon, Portugal, commenting upon plans for the exportation of American coal to Mediterranean ports in competition with English coal, says:

"This competition would be easier than on the Atlantic ports, for if the freight from Philadelphia to Marseilles, for instance, is twenty-four to thirty-six cents higher than the freight from Philadelphia to Havre, it must not be forgotten that the freight from Cardiff to Marseilles is seventy-seven or ninety-seven cents higher than from Cardiff to Havre. Vessels taking from sixteen to seventeen days to cross the Atlantic to Havre would take nineteen to twenty days to Marseilles, a difference in time of three days. On the other hand, vessels taking thirty-six to forty-eight hours to go from Cardiff to Havre would take ten days to reach Marseilles, a difference of seven to eight days. At the close of 1898 and during 1899 the Paris, Lyons & Mediterranean Railway purchased about 100,000 tons of American coal. There has been a decline in the price of English coal since 1900, making a difference in favor of English coal. It is announced that vessels of 10,000, 20,000, and even 30,000 tons will be built which will carry at the extraordinary low freight of \$1.16 per ton across the Atlantic. It would seem to be more prudent to begin with smaller vessels, having first ascertained the capabilities and requirements of the ports for which they are bound."

American Goods for India.

The United States consul at Calcutta, India, is in favor of the location of an exhibit or museum of American manufactures in that city. To support his argument he reports that \$250,000,000 worth of various products were imported in India during the year ending March 31 last, of which less than 2 per cent. were from the United States. He believes that an exhibit properly arranged would increase the interest of Indian buyers in American goods, while return cargo for the steamships could be secured in the form of jute, hides, indigo, tea and other products which are purchased largely by American customers.

For Use in India.

Ardashir Nowrojee & Co., importers of Bombay, India, write to the Manufacturers' Record that the articles in which they are principally interested are provisions, canned goods, confectionery, lubricating oils, paints, leather beltings, packings, etc., mill-furnishing stores, chemicals, coal tar, coal pitch, rosin and turpentine, general hardware specialties, builders' hardware, shelf hardware, heavy hardware, coach ironmongery and bent woodwork, patent medicines, lampware, glassware and enamelware, surgical instruments, electric novelties, small ware and handy things, stationery, pens and ink, cheap cycles, motor cars and sewing machines, cheap windmills and accessories, cheap India rubber, surgical and mechanical goods.

Trade With Roumania.

William Trauber, who has for eight years been manager of a coal firm at

Braila, Roumania, writes to the Manufacturers' Record that productions of the United States ought to find in Roumania an important outlet. He is anxious to get into communication with American firms dealing in iron, steel, cotton oil, tallow, grease, leather, hams and glucose who desire to establish branches in Roumania. He writes that there is a great demand for coal in that country.

To Add More Vessels.

The North German Lloyd Steamship Co. has decided to increase its passenger and freight service between Galveston and Bremen so that a steamship will leave each seaport every two weeks. The schedule will begin about October 1. Its passenger business by way of Galveston is steadily increasing, as well as the freight export tonnage, necessitating the additional vessels.

Notes.

Messrs. A. Barron & Co. of Leicester, England, write to the Manufacturers' Record that they are anxious to handle dough-mixing machinery and power saw-sharpeners of American make.

Progress at Brunswick.

[Special Cor. Manufacturers' Record.]

Brunswick, Ga., July 29. Brunswick is today gaining ground in her commercial and industrial upbuilding upon mature foundation. There is no "boom" here. This revival has been going on for the past five years, and has been greatly stimulated by the work of the new railroad (the Brunswick & Birmingham) in the past few months. This new road is now putting in connections at Thalmann, so as to form a connection with the Seaboard Air Line, with all probabilities that joint schedules will be established by August 15.

The hotel to be built on St. Simon Island is to meet winter as well as summer patronage. The Hotel Oglethorpe was not closed on account of the fire, and not a meal was lost. When refurnished it will be as fine as any in the South.

Bids are being advertised for by the government architects for all classes of contract work on the United States building that is to be erected here. One hundred thousand dollars is the total appropriation.

The annual report of the Mississippi river commission recommends an appropriation of \$3,000,000 annually for the next six years to be expended upon the levees and the deepening of the channel. The report states that the sum of \$2,225,000 has been expended during the year which it covers, the disbursements including levee and dredging work, repairs, surveys and materials.

The Merchants' Exchange of Charleston, S. C., has elected Messrs. Ashley C. Tobias, president; Henry J. O'Neill and E. H. Tincken, vice-presidents, and J. M. Baker, secretary and treasurer.

Since the middle of last February 145 permits for new buildings and improvements have been issued at Augusta, Ga., representing an expenditure of \$297,055.

Managers of mills, factories, furnaces, mines, etc., and parties starting manufacturing enterprises and needing machinery or supplies of any kind will find it profitable to consult the advertising columns of the Manufacturers' Record. Its pages contain names of the best houses in the country among manufacturers of and dealers in machinery and mill supplies.

RAILROADS.

[A complete record of all new railroad building in the South will be found in the Construction Department.]

Electric Lines in South Carolins.

South Carolina is becoming quite a center of electric-railroad construction. The line between Aiken and Augusta, Ga., being promoted by New York and Augusta capitalists, has already been described in the Manufacturers' Record. Another company has been formed under the title of the Greenville-Piedmont Traction Co. to build between the towns mentioned, a distance of twelve miles. It is reported that a Pennsylvania syndicate has become interested in this project. An extension will probably be built to Glenn Springs, White Rock and other resorts in the northern part of the State, connecting with the street-railway system of Spartanburg. Local capitalists are interested in this plan, which involves the construction of about twelve miles of railroad. The street-railway system of Charleston will also be extended to the exposition grounds during the present year, and it is expected to make contracts in the near future.

Earnings of the Southern.

An estimate of the earnings and expenses of the Southern Railway for the last fiscal year has been made public, which, it is reported, is based upon authoritative information. The Louisville & St. Louis division is not included in the figures, which show gross earnings of \$32,607,000, an increase of \$2,219,000 over the previous fiscal year upon practically the same mileage. The net earnings, it is reported, aggregate over \$10,000,000, an increase of 7½ per cent. compared with the previous year. A large proportion of the earnings were derived from the freight traffic, which has been widely diversified. Coal constituted 39 per cent. of the total freight tonnage; manufactured articles 28 per cent., lumber 17 per cent. and agricultural products 14 per cent.

Southern Pacific Earnings.

An estimate made of the earnings of the Southern Pacific Company for the year ending June 30 places them at \$80,000,000, an estimated increase of \$10,000,000 compared with the previous year. In connection with the report it is stated that the directors have practically decided to make the extensive improvements outlined some time ago in the Manufacturers' Record. They will include the relaying of the track with heavier rails, the rebuilding of a number of large bridges and the rebuilding of the roadbed on various sections.

Valuable Pamphlet.

The proceedings of the convention held at Brunswick, Ga., in the interest of the Brunswick & Birmingham Railroad have been published in pamphlet form, and contain a number of interesting speeches relative to the resources of the country through which the system is being completed. The addresses were made by manufacturers and others having a personal knowledge of the portion of the South referred to, and as a source of information the pamphlet is of much value.

Large Outlay for Rolling Stock.

The Southern Railway Co. has made arrangements through what is known as the Southern Railway Equipment Trust to cover the purchase of ten passenger engines, twenty-five freight engines and 2500 freight cars, representing an outlay of \$2,400,000. The rolling stock gives

an idea of the freight carried over the Southern Railroad, as it includes cars for furniture, grain, coal, fruit, vegetables, coke, live-stock and lumber.

Vicksburg to Hattiesburg.

In a letter to the Manufacturers' Record P. M. Harding, president of the Vicksburg & Northeastern Railroad Co., writes that it is expected to have surveys made in the near future for the line which is proposed between Vicksburg and Hattiesburg, Miss., 140 miles. Engineers have been engaged for the purpose.

A 350-Mile Project.

Mr. H. M. Levan of Cherryvale, Kan., president of the Gulf, Oklahoma & Kansas Shortline Railway Co. writes the Manufacturers' Record that the estimated length of the road is 350 miles. It is expected to have a portion of the road ready for operation by January 1, 1902.

Railroad Notes.

The Nashville, Chattanooga & St. Louis Railroad Co. has given an order for twelve consolidated locomotives to be delivered before October 1. They are to be used on the Chattanooga division of the road, hauling freight trains.

The Louisville & Nashville Railroad Co. is constructing 400 coal cars of the gondola pattern at its shops at New Decatur, Ala. They are of forty tons capacity and the largest ever constructed by the company at its own shops.

The 38-mile extension of the Macon, Dublin & Savannah Railroad between Dublin and Vidalia, Ga., it is estimated, will cost \$800,000, including equipment. The company has given a mortgage for \$1,500,000 to secure a bond issue of this amount.

A dispatch from Gadsden, Ala., is to the effect that arrangements have been made to consolidate the Gadsden & Attalla Union Railway with the light and ice companies of Gadsden. W. H. Weller has been elected president, and Charles S. Ward, general manager of the consolidated company.

The Southern Pacific Railway Co., it is stated, has decided definitely to enlarge its terminals at Houston, Texas. A new freight depot is being completed, and it is understood that an office building will also be erected in the near future. The shops will probably be enlarged by the addition of a forge, a woodworking shop, an upholstery shop and several smaller buildings.

The Southern Railway Co. has determined to build a new bridge across the Congaree river in the suburbs of Columbia, S. C., at a cost of about \$30,000. The bridge will be of the girder type, and a contract has been let to the Phoenix Bridge Co. of Phoenixville, Pa. A considerable mileage of the Southern system in South Carolina is being ballasted with rock obtained from quarries near Lexington.

The Central of Georgia Railway Co. has recently issued a work descriptive of the fruit-growing section upon its line, which contains an unusually large amount of valuable information to the prospector and horticulturist. The book is called "The Garden Spot of the South," and contains numerous illustrations of the large orchards for which Georgia is noted, especially those in the vicinity of Fort Valley.

The sales in the Joplin (Mo.) district during the week ended July 27 were 8,646,720 pounds of zinc ore and 1,352,740 pounds of lead ore, valued in all at \$134,618.

TEXTILES.

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the Manufacturers' Record. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

Textile Notes.

Gwinnett Cotton Mills of Lawrenceville, Ga., is now in the hands of R. W. Peeples as receiver. This action was taken owing to default on interest of bonds.

Archibald Henderson, purchaser of the Anniston (Ala.) Bag Mill, as announced last week, states that he expects to double the capacity gradually within the next twelve months. Present capacity is 25,000 bags daily.

It is proposed to remove a cotton mill to Alexandria, La., and a bonus of \$30,000 is required. F. M. Welch and others are endeavoring to secure the acceptance of the proposition. The plant would employ 150 people.

George Swearingen and associates of Langley, S. C., will establish a mill for knitting hosiery. Site has been selected and building will be erected. It is said that capacity will be several hundred dozen pairs per day.

J. W. Hanes of Winston-Salem, N. C., has announced that he will establish a mill for the manufacture of ladies' high-grade hosiery. The equipment of machinery needed has been bought, and will be in position by September 1.

The stockholders of the Jacksonville (Fla.) Knitting Co. held a meeting during the week to consider arrangements for rebuilding their burned plant. The capital stock will be \$25,000, as it formerly was. C. E. Garner will remain president.

C. N. McLean of Philadelphia has optioned land adjoining the Buena Vista (Va.) Woolen Mills, which he purchased recently. The land is proposed to be the site of additional buildings for the plant. It is said that new machinery has been ordered.

The Pocahontas Cotton Mills of Petersburg, Va., will expend about \$7000 for improvements and new machinery. The plant has ceased operations, so that the additions may be made with facility. A turbine wheel will be one of the new machines.

Collinge, Nolan & Co. of Paterson, N. J., have made a proposition to re-establish their silk mill at Hagerstown, Md. The branch was destroyed by fire recently. The company will rebuild, provided local investors supply \$4000 towards the erection of a \$11,000 building.

Rushton Cotton Mills of Griffin, Ga., mentioned last week as to double its 5000-spindle plant, states that the new building and machinery will cost about \$65,000. The new structure will be a 146-foot addition to present main building; the new spindles will number 6000 and the looms 128.

The Maryland Woolen Co. will be the title of the company reported last week as organizing to build a woolen mill on the Frederick road, near Baltimore, Md. The new structure to be built will cost about \$6000. It will be three stories and two stories high, 70x108 feet. Nicholas W. Steele will be manager.

Hamp E. Reynolds of Aberdeen, Miss., states that his proposed cotton-mill company, lately mentioned, is contemplated to have capital stock of \$260,000 and be

organized on the co-operative plan. An endeavor will be made to interest an experienced manufacturer or superintendent from the Carolinas or Georgia. Correspondence is invited.

De Soto (Ga.) Fruit, Agricultural & Manufacturing Co. has been incorporated, capital stock \$60,000, to cultivate fruit, erect canneries, build cotton factory, etc. J. A. Ansley, Americus, Ga.; C. B. Duffey, Worcester, Mass.; T. B. Clements, Faribault, Minn.; H. O. Clement, Moultrie, Ga.; Charles L. Smith and E. L. Smith of De Soto are incorporators.

Rapid progress is being made towards the completion of the No. 3 mill of the Graniteville (S. C.) Manufacturing Co. This addition is a three-story 130x294-foot structure, to contain 15,500 spindles and 560 looms, which machinery is now being installed and will be ready for operation by September 1. The company's total of spindles will be then 50,400 and of looms 1666. About \$450,000 is the expenditure on this enlargement.

The bondholders of the Sutro Cotton Mill at Yorkville, S. C., who purchased the 5000-spindle plant at the recent sale, have organized a new company, the Tavares Cotton Mills, with capital of \$40,000, to put the mill in operation. Directors elected are Messrs. G. H. O'Leary, W. Brown Wylie, W. G. White, B. N. Moore and S. M. McNeel, all of Yorkville; M. L. Smith of Clover, S. C., and Mr. Eddy of Charlotte, N. C. The present indebtedness is about \$5000. A cash surplus of \$15,000 will be raised, and after paying off the indebtedness about \$10,000 will remain for operating the plant and adding new machinery.

Cottonseed-Oil Notes.

The Victor Cotton Oil Co. of Gaffney, S. C., has increased its capital stock from \$25,000 to \$60,000.

The Marlin Oil Co. of Marlin, Texas, has amended its charter by increasing its stock from \$100,000 to \$150,000. The object of the increase in stock is to provide for the building and operation of a new cottonseed-oil mill at Mart, McLennan county, Texas.

The recent sale of the Sterling Cottonseed Oil Co. of Macon, Ga., to the Southern Cotton Oil Co. of New York was one of the largest transactions ever closed in Macon. The price paid is said to have been \$125,000, and the property conveyed is one of the most valuable in the South.

The Farmers' Oil & Fertilizer Co. of Lavonia, Ga., has been organized with the following officers: President, T. F. Allison; vice-president, Oscar Cannon; secretary and treasurer, J. W. Cannon. The capital stock of the company is \$15,000, and is taken by seventy-five prominent farmers in and around Lavonia.

The plant of the Palestine Oil Mill Co. of Palestine, Texas, is now undergoing some extensive and substantial improvements. The old machinery is being replaced by new machinery, all of the most modern type. The capacity of the mill will be enlarged from sixty tons to 125 tons per day. This company is now erecting a big oil mill at Jacksonville, Texas, of eighty tons per day capacity.

The market for cottonseed products has been very quiet during the past week. There has been some export inquiry for new crop of oil, but offerings are generally light. The following quotations were current on the 29th ult.: Prime crude oil, loose, 24½ to 25 cents; and prime summer yellow oil, 28 to 29 cents; linters, per pound, 2 to 2½ cents, all f. o. b. mill at interior points, as to location; prime cottonseed meal, \$20 to \$21 per ton, and prime cottonseed cake, \$19.75 to \$20.50 f. o. b. Galveston.

The following are official quotations on cottonseed and cottonseed products as posted at the New Orleans Cotton Exchange on the 29th ult.: Prime refined oil in barrels, 36 to 37 cents per gallon; off refined oil in barrels, 35 cents per gallon; prime crude oil, loose, nominal per gallon; prime cottonseed cake, \$23.50 per ton of 2240 pounds; off do., nominal; prime cottonseed meal, \$23 per ton of 2240 pounds; off do., nominal; soap stock, loose, 1 cent per pound; linters, per pound, choice, 3½ cents; A, 3½ cents; B, 3¼ cents; C, 3 cents; cottonseed in sacks delivered in New Orleans, nominal per ton of 2000 pounds; in bulk delivered in New Orleans, nominal per ton of 2000 pounds.

The Virginia-Carolina Chemical Co., it is stated, has during the past week closed deals for the following cottonseed-oil plants in the South: The Excelsior Manufacturing Co., which conducts an oil mill, ginnery and fertilizer plant at Washington, Ga., has sold its plant to the Virginia-Carolina Chemical Co. for \$55,000. The new owner will continue to operate the plant as heretofore, and will make Washington a distributing point for this section of the State. On the 25th the same company purchased the Newberry Cotton Oil Mill of Newberry, S. C., under the management of L. W. Floyd, for \$45,000. The company has also purchased the Cordele Cotton Oil Mill at Cordele, Ga. The price paid for this property is said to be \$75,000. The owner has taken charge and will continue to run the mill, and may also establish a fertilizer factory in connection with the plant. It is stated that the Virginia-Carolina Company has also purchased from Messrs. P. B. Maynard & Co. the cotton-oil mill and public gin at Forsyth, Ga. The new owner will greatly improve the plant, and will begin to operate it as soon as the season opens. The Goldsboro Oil Co. of Goldsboro, N. C., one of the most successful of the enterprises in that city, has been purchased, of which Mr. Frank Borden, one of the original owners, will have the management. The Florence Oil Mill at Florence, S. C., was also purchased and the transfer made during the week in Columbia. The mill will be enlarged by the new owners.

The internal revenue receipts during the past fiscal year amounted to \$306,871,669. Of this amount the following sums came from the Southern States: Alabama, \$573,254; Arkansas, \$265,909; Florida, \$804,807; Georgia, \$924,379; Kentucky, \$25,181,305; Louisiana and Mississippi, \$2,399,981; Maryland, Delaware, District of Columbia and the two Eastern Shore counties of Virginia, \$9,630,133; North Carolina, \$7,124,749; South Carolina, \$310,590; Tennessee, \$2,406,180; Texas, \$1,681,424; Virginia, excluding the two counties already mentioned, \$5,623,008; West Virginia, \$1,631,576.

Scribner's Magazine for August is the annual fiction number, and it contains seven complete short stories, the beginning of a new serial and special illustrated articles and poems. The color printing is shown at its best in the exquisite work of Maxfield Parrish, who has found a very congenial subject in Quiller-Couch's story of the Cornish coast, which has to do with a classical legend. These drawings are the most remarkable in color which have been yet attempted. There is also a beautiful cover design by Albert Herter, which it has taken ten printings to reproduce.

The first bale of Texas cotton sold at Galveston this year brought fifteen cents a pound. It was shipped to Liverpool.

PHOSPHATES.

Phosphate Markets.

Office Manufacturers' Record,
Baltimore, Md., July 31.

The phosphate market, as in that of other fertilizer ingredients, shows a more decided tone locally, and there is considerable business being developed in a quiet way. Manufacturers have been buying larger parcels, and for all classes of rock the market is a shade firmer. The phosphate charters reported during the week were as follows: British steamer Cyril, 1469 tons, from Fernandina to Rotterdam at 15½, July-August; British steamer Sandfield, 1294 tons, from Tampa to Granville at 19½, August; British steamer Thorntondale, 1390 tons, from Tampa to St. Nazaire at 17½, August; British steamer Ellamy, 1747 tons, from Tampa to the United Kingdom or Continent on private terms, prompt, and British steamer Arlington, 1986 tons, from Fernandina via Norfolk to Rotterdam with phosphate and general cargo at 10½, net form, prompt. At producing points the movement shows more activity, both in output and export. The situation in Florida continues to show more activity, both in mining and in shipments from the various ports. The demand has been so decided recently that miners are pushing work at the various plants with greater enterprise in order to fill contracts. The shipping outlook at Fernandina has brightened very materially in the last fortnight. During the present month six or more steamers sailed with full cargoes of phosphate rock, and about ten steamers are due to load during early August. At Tampa everything in the phosphate way is attended by quick dispatch for vessels, and both in pebble and hard rock there is an unusual rush to make prompt shipments. In South Carolina work at the various companies' plants is being vigorously pushed, and at Pon-Pon there is also a more extended development expected in the near future, some of the most prominent companies drawing on these mines for large shipments. The market is very steady, with a moderate domestic and foreign demand. In the Mt. Pleasant district of Tennessee phosphate continues to show a firmer tone, especially for export rock, while there has been a better volume of business during the past week in domestic rock. The most prominent companies at Mt. Pleasant are well satisfied with the future outlook, and so far they are all working harmoniously, taking a firm stand as to prices, thereby holding the market in good form. Prices at the close are unchanged from those ruling a week ago.

Fertilizer Ingredients.

The market for ammoniates has ruled fairly active during the week, with sufficient demand to absorb current offerings. Producers are generally firm in their views. There is a fair demand from the Eastern markets, and also some Southern inquiry. Sulphate of ammonia is quiet and firm, while nitrate of soda is firm for all positions.

The following table represents the prices current at this date:

Sulphate of ammonia (gas)...	\$2 67½ @ 2 72½
Nitrate of soda, spot Balto. N. York.	1 85 @ 1 90
Blood	2 35 @ 2 35
Azoline (beef).....	2 35 @ —
Azoline (pork).....	2 35 @ —
Tankage (concentrated).....	2 25 @ 2 27½
Tankage (9 and 20).....	2 30 @ 2 35 & 10
Tankage (7 and 30).....	20 00 @ 21 00
Fish (dry).....	27 50 @ 30 00

Phosphate and Fertilizer Notes.

The Southern States Phosphate & Fertilizer Co., with headquarters at Augusta, Ga., will obtain its phosphate rock for its Savannah factory from the extensive deposits near Pon-Pon, S. C., where

rock in the greatest abundance is to be found.

The British steamer Craignair cleared last week from Savannah, Ga., with 2506 tons of high-grade Florida phosphate rock for Hamburg, and the Belgian steamer Clematis for Antwerp with 1498 tons.

The schooner S. B. Marts cleared last week from Charleston, S. C., with 800 tons of phosphate rock for Baltimore. The total shipments of phosphate rock from Charleston to domestic ports for the season amounts to 38,858 tons.

At a meeting of the board of directors of the Southern Chemical Co. of Winston-Salem, N. C., a dividend of 3½ per cent. was declared on the preferred stock of the company and 3¼ per cent. on the common stock. H. B. Battle is president of the company.

At the East Coast Lumber Co.'s logging camps, fifteen miles from Watertown, Fla., a belt of phosphate rock has been discovered a few feet under the surface of the ground. It has been pronounced of a high grade, but as yet it is not known the extent of the deposit or its depth below the surface.

There has been unusual activity among phosphate shippers at Fernandina, Fla., during the past week. The British steamer Elwick Tower cleared on the 26th ult. with 5000 tons of phosphate rock and other cargo; the steamer Cyril arrived in Fernandina on the 24th ult., and will take out 3000 tons of phosphate rock for Rotterdam; the schooner Senator Sullivan cleared on the 25th for Elizabethport, N. J., with 1050 tons.

The Southern States Phosphate & Fertilizer Co. of Augusta, Ga., was incorporated last week, with a capital stock of \$300,000, with privilege of increasing the same to \$1,000,000. The incorporators are Messrs. F. B. Pope, Porter Fleming, Jiles M. Berry, Wm. H. Fleming, Geo. R. Lombard, Joseph H. Day, E. C. Fleming, Frank X. Dorr, James B. Walker, Warren Walker and Thomas Barrett, Jr., all of Augusta, and Frank R. Screven, J. A. G. Carson and Abe S. Guckenheimer of Savannah, E. R. Hodgson of Athens, T. M. Green of Washington, Wilkes, Jr. C. Neely of Waynesboro and Lamar L. Fleming of New York. The company will mine, purchase and sell phosphate rock, and purchase, manufacture and sell fertilizers, and will conduct a general fertilizer and cotton-oil business. A small plant will be operated at Augusta, Ga., in connection with the large new plant, which will be at once erected at Savannah. The principal office of the company will be at Augusta, from which point all business will be transacted.

Of all the writers who have lately become close friends of the public, none has taken a firmer hold than Ralph Connor, with his "Sky Pilot." We have seen far too little of the Pilot himself, and we feel this all the more on reading the story of his last adventure in "The Swan Creek Blizzard," which appears in the August number of Leslie's Monthly. This mid-summer number is a notable one for fiction. Miss Cholmondeley, author of "Red Pottage," contributes a story in a vein which is apparently a new field for her. "Let Loose" touches with great suggestiveness upon the thin line which divides the natural world from things not easy to understand. From Mr. Hornung the magazine has secured a capital tale of the Australian Bush; its title, "The Taking of Stingaree," is very suggestive of the author's skill.

Shipments of 250,000 tons of coal from the Blocton mines in Alabama to Mexico have begun at Pensacola.

MECHANICAL.

Fast-Feed Flooring Machine.

We give an illustration of the H. B. Smith Machine Co.'s P-7 Floorer or

scraper, constitute the feeding mechanism. The feed is driven by its compound variable feed mechanism, a device which it has thoroughly tested under all possible conditions in its testing-room for the past eighteen months, and which it has had in

with the independent action of the roll for the variation in thickness in stock.

By the right-side view it can be seen how thoroughly safe the gears are from damage by shavings through the medium of their thorough gear casing. In connection with the feed chain there is not a single loose gear revolving on a stud, all being fastened to shafts which revolve in long babitted bearings. The construction of the patented expansion gear casing is highly commendable, as all tendency to twisting strain, to which independent expansion links are subject, is eliminated. The top head, which is double-belted and makes 4360 revolutions per minute, has journals $2\frac{1}{2} \times 11$ inches. Pressure bars about this head can be set out two and one-half inches from the normal six-inch cutting circle for extra deep cuts. The bottom head, which is double-belted and makes 4360 revolutions per minute, has journals $2\frac{1}{2} \times 11$ inches. The mouthpiece and pressure bar before this head can be set out one inch from the normal six-inch cutting circle for deep cuts.

The side spindles are one and three-quarters inches in diameter, have a seven-inch top and a four-inch bottom bearing. They are one and five-eighths inches in diameter at the upper end, where the heads go on. They rest on a brass oil step, the construction of which gives a continuous circulation of oil while spindles are in motion. The side spindles are driven by four-and-one-half-inch belts, which run over a drum on the second countershaft, giving direct pull, prevent-

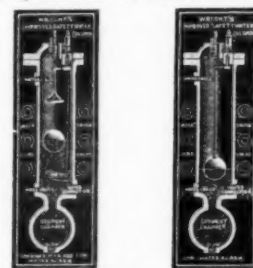
side either while setting up or running.

The long guide is made of angle steel, and cannot be broken. It, in combination with the in-feed roll, is slightly pitched to cause the stock to run to guide.

The in-feed end view shows the unbreakable wrought-iron table and the long swinging guide at the in-feed end of the machine. Further information can be had by writing the H. B. Smith Machine Co., Smithville, N. J.

Wright Safety Water Columns.

Many features of the Wright Improved Safety Water Columns, illustrated by the accompanying cuts, will commend them to engineers generally. Mechanics recognize the fact that the inconvenience and expense of making any repairs that may be necessary are reduced to a minimum when all the working parts are attached to the cap, as is the case with the Wright Column. Any repairs that may be necessary may be made to the columns by sim-



WRIGHT SAFETY WATER COLUMNS.

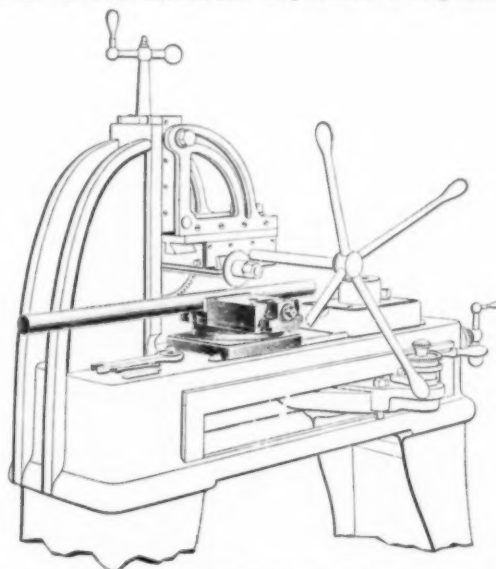
ply removing the bolts from the flanges, when every part is not only accessible, but removable.

Briefly stated, the improvements in these columns include one vertical, instead of two horizontal valves; one seamless round float, instead of two oblong floats, with seams; all parts attached to the cap; gauge-cocks on either side; extra heavy construction.

The Wright Manufacturing Co. of Detroit, Mich., will be pleased to furnish further particulars.

Vise Attachment for Whiton Gear-Cutting Machine.

The device illustrated herewith fastens on the bed of the machine near the cutterhead. It has a graduated base, so that cuts may be taken at any angle. In connection with the vertical angular adjustments of the cutterhead, it affords facilities for almost any class of work within the cutter-driving capacity, and makes a very effective milling machine. The gear-



VISE ATTACHMENT FOR WHITON GEAR-CUTTING MACHINE.

ing the bowing of belts and making the drive much heavier. The pressure shoes about these heads can be adjusted to one and one-half inches from the normal six-

cutting machine on which this attachment is used is manufactured by the D. E. Whiton Machine Co., New London, Conn., which will be pleased to send prices upon application.

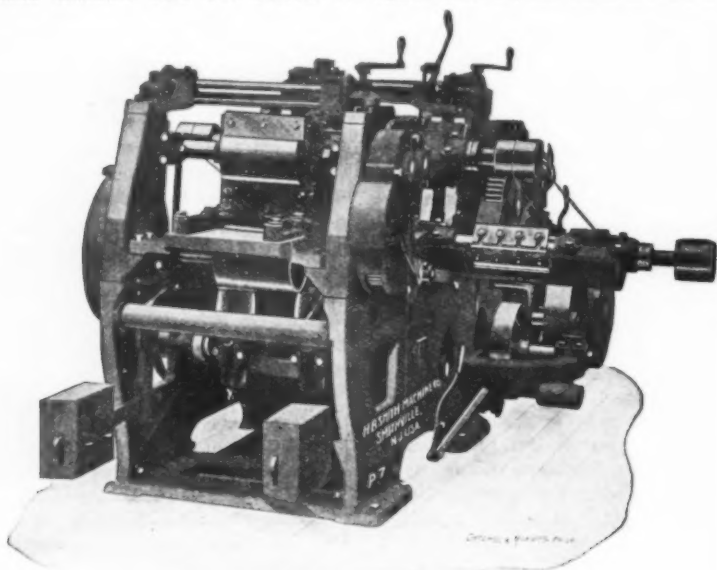


FIG. 1.—FAST-FEED FLOORING MACHINE.

Planer and Matcher. It is built particularly for making flooring, having a hoist of six inches and a working width of ten. This illustration shows the left-hand or work side of the machine, and gives a

operation in many of the large mills throughout the country for the past year. By this variable feed the operator can instantly change the speed from twenty to eighty feet per minute, or any intermedi-

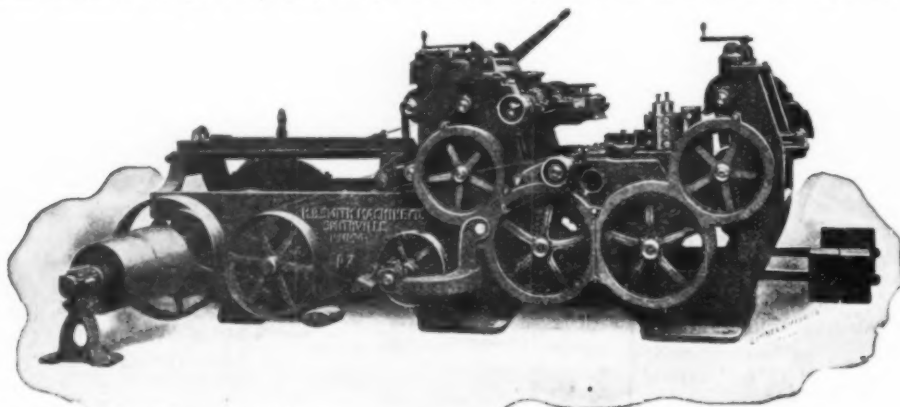


FIG. 2.—RIGHT SIDE VIEW.

good idea of the massiveness and strength throughout. The main frames are eleven feet long, have heavy diagonal ribbing, which takes each strain to an anchorage spot at the girts, and are bolted

ate, varying by tens, that might be required, or should occasion arise, he can instantly reverse the feed by the same varying lever. The feed can be started or stopped while the operator is at the in-

ing the bowing of belts and making the drive much heavier. The pressure shoes about these heads can be adjusted to one and one-half inches from the normal six-

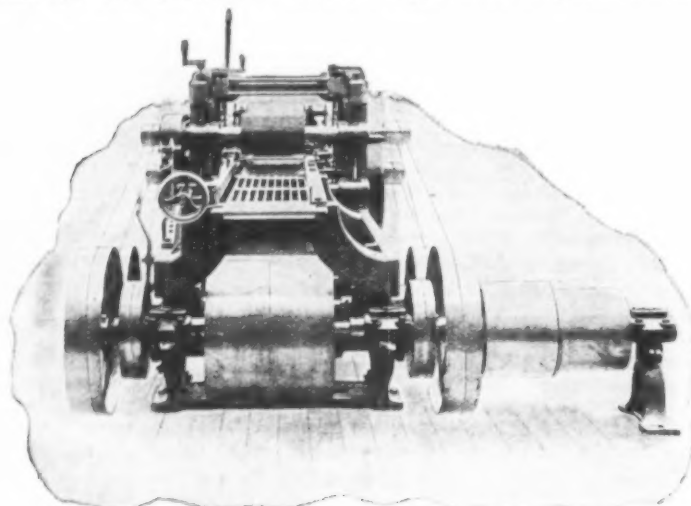


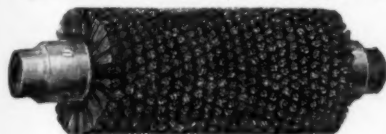
FIG. 3.—IN-FEED END VIEW.

together by eight of these large and heavy girts. Six heavily weighted parallel hoisting feed rolls seven and one-half inches in diameter, with the upper in-feed rolls fluted and the upper out-feed roll provided with cover and

feed end of the machine or standing at the head groups, levers being provided for this purpose as a time-saver in operating the machine. While both the upper in-feed rolls are hoisted by a single crank, still this arrangement does not interfere

Felton's Mill Brushes.

The name of Felton has been associated with brushes for half a century. The industry, controlled by the S. A. Felton & Son Co. of Manchester, N. H., represents



CYLINDER COMBER BRUSH.

what is really a lifetime of experience in the manufacture of these articles, and the wide reputation which the company enjoys in the industrial world is fully merited. Some of its specialties are revolv-



COMBER DUSTER.

ing flat-card brushes, the cylinder comber brushes, comber dusters, grinder brushes, bottle brushes, loom dusters, floor brushes, as well as finger, reed, doctor, picker, scrub and sprinkler brushes. They are in very extensive use. Manufactur-



GRINDER BRUSH.

ers requiring brushes of any kind find them really indispensable. The revolving flat-card brushes are manufactured of Russian bristles set in cement and securely pegged, preventing the bristles from shedding. The same care is em-



BOTTLE BRUSH.

ployed in the construction of the other forms of brushes shown in the accompanying illustrations. The popular size of the comber duster is a five-inch block. The grinder brushes are sixteen, eigh-



FLOOR BRUSH.

teen and twenty inches in length, with five, six and seven rows of bristles.

For cleaning intricate parts of machinery, especially between spools on spinning-frames, the comber dusters are especially desirable, as they will reach into



PRINT WORKS FURNISHER.

crevices which cannot be touched by other forms of brushes. They are also manufactured of Russia bristles, and so securely fastened as to prevent any shedding. The floor brushes have found much favor for collecting lint, cotton waste, etc.,



PICKER BRUSH.

in the aisles of spinning and weave rooms, and a special size is manufactured running from twenty-four to thirty-six inches in length.

A word might be added relative to the print works furnishes, which are con-

structed of pure wood fiber made by a process controlled exclusively by the company. They will not mat down, are not affected by acids or alkalies, and can be easily cleansed with water. The fiber is fastened with cement and pegs, making it absolutely secure.

Modern Steam Heating.

In these days when so many appliances have been invented for providing an adequate and healthful system of heating it seems exaggeration to say that the Broomell system has many special advantages, but the Vapor Heating Co. of York, Pa., which installs it, has plenty of evidence to verify its claims. The Broomell system is installed in such a manner that leaks

in the boiler, pipe-joints or radiators are practically impossible. It can be regulated to suit the requirements of the weather, as each of the radiators using the system can be placed in service independently of the others. All of the heat

is secured from vapor arising from boiling water, which is not under pressure, thus giving the advantage of hot-water heating with none of its defects. By means of the patent valve employed it is an absolute impossibility for radiators to

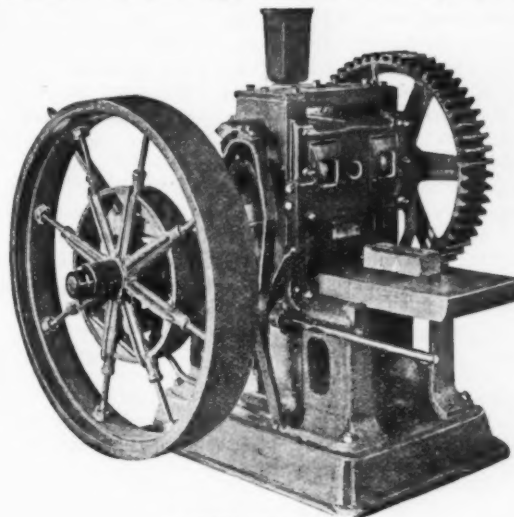
fill with water, and no matter how the system is handled, it is noiseless, a very desirable quality.

The Vapor Heating Co. has already received orders from points in the South.

has been on the market for three years. It has proven itself equal to the hard service required of any brick machine.

This repress, as one will see from cut, is very simple, and, we believe, as compact as a repress can be built, and "compactness is strength." It does the work of the most complicated presses, and does it with ease. It has a capacity of from 10,000 to 15,000 per day, though, like other presses, it does better work when run slowly, as the pressure stands on the brick longer.

All bearings are above dirt, which is a very great advantage. The feed arrange-



BRICK REPRESS.

ment is on one side, out of the way of the other parts, at the same time making the parts accessible. The two cams working inside of the crosshead exert the pressure almost directly down on the upper plunger, practically relieving all cross strains, and giving great strength without undue weight. The crosshead has only four-and-one-half-inch stroke, which admits of fast running without jar. The mold-box is lined with hardened steel. Plungers are faced with steel, and have steel liners for taking up wear. The manufacturers would be glad to give any further information in regard to this machine.

Compelled to Enlarge.

York, Pa., the active industrial center of that State, will probably in the near future have the largest malleable-iron plant in Pennsylvania, and possibly in the Eastern States. The Norway Iron & Steel Co. of York has such a demand for this product that the company has decided to increase its capital to enlarge its works. Two annealing furnaces will be placed in service, besides those already in use, as soon as possible.

It is interesting to note that the Norway has secured a number of contracts for small malleable castings directly at home, which is perhaps the best proof of its work.

The Chautauquan for August contains an article entitled "Women Deans of Women's Colleges," by Jane A. Stewart. This article is illustrated with portraits of some of the leading women educators of the country. "Word-Coinage by Living American Authors," by Leon Mead, contains very interesting statements concerning word-coinage from Edmund Clarence Stedman, Thomas Wentworth Higginson, Prof. Henry A. Beers, Clinton Scollard, Capt. Alfred T. Mahan, Rev. Henry Van Dyke, Lloyd Mifflin, Edgar Fawcett and many others. Prof. Edwin Erle Sparks of the University of Chicago writes of "The Record of a Lost Empire in America." His article is fully illustrated.

LUMBER.

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

LUMBER MARKET REVIEWS.**Baltimore.**

Office Manufacturers' Record, Baltimore, Md., July 31.

The week under review finds the local lumber market in a more satisfactory condition, and as the season progresses the demand for lumber in certain lines is

showing a more decided tone. The movement last week was fairly active, and sales reported show better prices all along the line. Stocks at the moment are in good shape, but in North Carolina pine there is a scarcity in certain grades. The demand for this commercial wood is at the moment quite brisk, and mills are in some cases far behind in filling orders. The New England markets are drawing largely on kiln-dried grades, which show an advancing tendency, while air-dried lumber is about steady as to value. The foreign demand for North Carolina pine is improving, and several good German orders have been filed during the week. Georgia pine is showing some good features, and prices continue firm, with stocks moderate. In white pine the market is steady, with a fair demand. The hardwood market continues to rule quiet, yet withal the movement is about an average as to the volume of business. Furniture factories and all woodworking concerns, both local and out of town, have been purchasing in small lots, and later on the market is expected to show a much better tone. Oak and ash are already in better request, and values are ruling firmer, with stocks of dry lumber only moderate, as reported at milling sections. The foreign demand for hardwoods is still light, and English markets are generally flat, while continental ports are buying very little at present. Stocks at all foreign ports are fully ample for present wants.

Norfolk.

[From our own Correspondent.]
Norfolk, Va., July 20.

The general features surrounding the lumber market in this section are very promising for a substantial trade during the summer months, with every indication of considerable activity during the early autumn; in fact, all departments of the business in wood products show material improvement, and in North Carolina pine the demand is generally active. The dullness incidental to midsummer has not shown itself to any extent in this branch of trade, and in Virginia and Eastern North Carolina mills, it is stated, are all

running on full time, and orders already booked by manufacturers in this section will carry them through the summer and well into autumn. Under the present demand prices are firm, and are pretty certain to advance sharply, as the demand at the moment is greater than the visible cut. Planing mills are all very busy, with numerous orders on file and dressed lumber firm and advancing. The New England markets are taking nearly all the dressed lumber, and orders from other sources are being refused daily. In hardwoods for reshipment to Europe the Seaboard Air Line Railway is having a large traffic, and, besides trainloads of North Carolina pine timber for domestic manufacture, large lots of hewn square cypress, oak, walnut and other timber for export to continental ports are being received. The lumber situation in this section, taken as a whole, is characterized by the most favorable indications, and manufacturers are generally satisfied with the present outlook. The offering of desirable vessels for carrying lumber is light at the moment. Rates to Baltimore \$1, Philadelphia \$1.50 to \$1.75, New York \$2.25 to \$2.50, and Sound ports and eastward \$2.75 to \$3.

Charleston.

[From our own Correspondent.]
Charleston, S. C., July 29.

The lumber industry in this section of the State is showing indications of marked improvement in its various avenues, and the activity, both at this port and Georgetown, is unusual at this period of the season. At this port the lumber market continues to show a very steady tone, and the demand from Northern sources is improving as the season passes. During the past week the following shipments were reported: For New York steamer Iroquois with 25,304 feet of lumber; steamer Apache with 40,781 feet; schooner Helen Montanus with 305,000 feet; steamer David for Philadelphia with 700,000 feet; steamer Navahoe for Boston with 45,314 feet; schooner Emma Knowlton for Providence with 278,000 feet, and schooner Edgar C. Ross with 300,000 feet of lumber for Bridgeport. The mills at Georgetown have plenty of orders, and are running on full time, with receipts of cypress and pine logs very liberal. The Atlantic Coast Lumber Co. has been making some large shipments, having recently shipped by steamer Georgetown 1,600,000 feet of North Carolina pine, all dressed, to Portland, Maine. The steamer Wacnamaw, another steamer of the Atlantic Coast Company, took out 1,250,000 feet. There is a brisk demand for shingles and cross-ties, and shipments are increasing in volume. There is a good inquiry for desirable tonnage for carrying lumber, but the offering of such vessels is moderate, with rates unchanged. The schooner A. C. Stubbs, 295 tons, was taken this week to load lumber at Georgetown for New York at \$5.

Savannah.

[From our own Correspondent.]
Savannah, Ga., July 29.

The situation in all departments of the lumber industry in Southern Georgia continues to improve, and at this and nearby ports the volume of business is much better than usual at this period of the season. Advances from milling sections are to the effect that mills are well supplied with orders, and are running regularly with sufficient to keep them employed for thirty or sixty days. The general list of values continues as previously reported; sawn ties, \$8 to \$9 per 1000 feet; hewn ties, 7x9x8½, 35 cents each; minimum easy size yard stock, \$10.50 to \$11; car sills, \$12 to \$13; stock 14 to 16-inch, as to length, \$15 to \$16, and ship stock, \$16. The shipments during the past week

amounted to over 2,000,000 feet of lumber. At Brunswick trade is active, and shipments good. There is, however, some difficulty in obtaining the proper kind of labor, and business in many lines of trade is somewhat restricted in volume. Mills at St. Simons are all very busy, and have an abundance of orders. The Brunswick & Birmingham Railroad is building a spur track to the immense cypress mills of the Taylor-Cook Company on Back river. This road will give the mill an additional supply of about 150 cars of logs a week. This mill cuts 100,000 feet of lumber per day. Western capitalists are negotiating with parties in Brunswick to erect a large furniture, sash, door and blind plant for export shipments. At Darien the market is quiet and steady. Lumber freights continue steady, with vessels rather scarce. The following charters were reported last week: Schooner Jennie Thomas, 576 tons, from Savannah to New York with lumber at \$5.25, option New Haven \$5.37½, and schooner J. G. Schmidt, 450 tons, from Brunswick to Philadelphia with resawn lumber at \$5 and hewn timber at \$6.

Memphis.

[From our own Correspondent.]
Memphis, Tenn., July 29.

Business among the hardwood lumbermen in the Memphis district during the week under review has scarcely been up to the recent low average, the dullness noted in former reviews having become more intense. There have been numerous inquiries coming forward all the while, though there has been very little business, relatively speaking, gotten through, even in domestic circles. Some of the representatives of large firms here who are now in the North and East are advising their houses that the outlook for the immediate future seems to have in it very little of brightness. There has been no particular change in the relative positions of the wood. Plain red oak continues in good call. Stocks of this are low, and dealers are experiencing little difficulty in finding ready sale for it. The real trouble lies in the smallness of the stocks. Quartered white has moved with increasing freedom, as was noted last week, and stocks of this, too, are down to a pretty low ebb. But unless there is quite a perceptible increase in the demand for this item, the small stocks here will answer all the immediate requirements of the trade. Quartered red and plain white are in the same category in most respects, though there is probably a better inquiry for the plain. Gum has shown little activity, while cottonwood has not picked up as rapidly as had been expected. Poplar and ash are moving as well as could be expected, with a good portion of the business here in the latter, which is offering in only moderate quantities. Cypress continues to occupy an envious position on the list, the call for this having continued quite up to the recent high average. The door, sash and blind men are behind in their orders still, and the fact that many of the trade here are shipping out this wood on contracts is giving it a greater degree of activity than can be found almost anywhere else. There is no change of note in prices in either direction. The long-deferred advance is causing some of the trade to weaken slightly in their hope of an early gain in values, though this has not brought about any disposition to make concessions from ruling figures, except in the slowest sellers, where there is a desire to unload some of the stock that has been carried for some time. There is a hardening tendency among the leading woods, almost to an item. Most of the mills are running on full time, though some of them are shut down,

both here and in this district, on account of large stocks, and partly on account of the difficulty experienced in getting labor. The log supply is about all that could be desired under existing conditions, and the millmen are not putting forth any extra efforts to increase their holdings. The softwood mills and the various woodworking plants have had another good week.

Lumber Notes.

The steamer Lingfield cleared last week from Mobile for Delfzijl, Germany, with 6102 cubic feet of hewn timber and 538,000 feet of sawn timber.

The receipts of lumber at the port of New Orleans last week amounted to 244,500 feet, and for the season 133,532,635 feet, against 33,309,000 feet last year.

The British steamer Elwick Tower cleared from Fernandina, Fla., on the 26th ult. for Rotterdam with 700,000 feet of yellow-pine lumber and other cargo.

The Jetton-Dekle Lumber Co. of Tampa, Fla., has been organized, with a capital stock of \$30,000, by M. M. Jetton, Lee Dekle, J. C. Griswell and Hamilton McFarlan.

The Forest Furniture Co. is another new enterprise at North Wilkesboro, N. C., with a capital of \$25,000, with the privilege under its charter of increasing it to \$100,000.

The Weldon-Smith Lumber Co. of Austin, Texas, has been chartered, with a capital stock of \$10,000. The incorporators are S. C. Ratliff, J. B. Clem, James A. Smith and others.

A factory for the manufacture of cedarware will be established at Huntsville, Ala., within the next few days. A company for this purpose is being organized by Huntsville capitalists.

The Drake Lumber Co. of Austin, Texas, has been chartered, with a capital stock of \$10,000. The incorporators are Carl F. Drake, John H. Comer, D. R. Stewart and J. Web Davis.

The Edwards Lumber Co. of Dovesville, S. C., has been chartered, with a capital stock of \$5000. The officers of the company are J. L. Edwards, president; E. C. Coker, secretary, and J. L. Edwards, treasurer.

The plant of the Leonard Hoop Co. of Petersburg, Va., was sold at public auction last week and purchased by the Bank of Petersburg for \$1000. It is not known what disposition the bank will make of the property.

The large brick planing mill owned by W. L. Davis of Petersburg, Va., was destroyed by fire on the 25th ult., together with a large quantity of lumber. The loss is estimated at between \$12,000 and \$14,000, with insurance \$3500.

Capt. T. P. Ayers of Nashville, Tenn., has just consummated a deal for the sale of 13,406 acres of timber land in the long-leaved pine belt of Alabama, the purchaser being C. D. Danhere of Chicago. The consideration is said to be \$85,000 cash.

The S. & W. H. Northrop Lumber Co. of Wilmington, N. C., will rehabilitate its plant at once. New machinery will be installed and the present machinery on the site thoroughly overhauled and the entire plant placed in proper running order.

The Greenwood Lumber & Manufacturing Co. of Greenwood, S. C., has been incorporated. The incorporators are Joel R. Abney, S. B. Marshall and Major S. P. Brooke. A lot has been purchased on which buildings will be erected, and work will begin at once. W. J. Snead, a prominent contractor of Richmond, Va., and his

brother, E. K. Snead, are about to establish a lumber plant at Greenwood. Options have been secured on several sites, and the selection will soon be made.

The East Side Lumber Co. of Mobile, Ala., has been organized, with J. T. McKeon, E. C. Wheat, Bart L. Stafford and Harry T. Smith as directors. It is capitalized at \$10,000, and will operate the mill at Blakely Island, across the river from Mobile.

The steamship Seminole of the Clyde Line cleared last week from Jacksonville, Fla., for New York with 240,000 feet of lumber, and the schooner Jonathan Sawyer for the same port with 72,683 feet of yellow-pine lumber and 211,950 feet of cypress lumber.

The new stave mill at Hartselle, Ala., commenced business last week, with a capacity of 7000 staves a day. The proprietor of another stave mill with capacity of 30,000 staves daily is negotiating with citizens of Hartselle for a location, and on getting the required concessions will establish his plant at that place.

W. M. Mecklan of Olean, N. Y., who owns and controls several valuable wagon patents, visited Nashville, Tenn., last week for the purpose of interesting the capitalists of that city in the construction of a new \$125,000 wagon-manufacturing plant. Mr. Mecklan appeared before a committee of the Chamber of Commerce and laid his plans before that body. A committee was appointed to investigate the patents, and on a favorable report it is stated that the money will be raised to construct a plant.

An Introduction to the Industrial and Social History of England. By Edward P. Cheyney. Publisher, the Macmillan Company, New York and London.

This is primarily a text-book for college and high-school classes. To facilitate wider investigation of the mass of subjects treated, Professor Cheyney has added to each chapter a bibliography of the most important secondary authorities in a field of intensely practical interest to students of the development of the English race. Moreover, by a system of narrative paragraphs in each chapter matters of economic and social history are correlated with other aspects of the life of the nation. So, the text-book becomes a convenient volume for the use of the original reader who may have little time at his disposal for original research, or even for a study of the larger works which have been published. After an introductory chapter sketching the growth of the English nation to the middle of the fourteenth century, the author describes rural life and organization, the medieval village and the manor, with its people and its administration; the government of towns, with the guild merchant and graft-gilds, markets and fairs, trade relations between towns and foreign commerce. A chapter dealing with the Black Death and the Peasants' Rebellion is treated as covering the turning-point from medievalism to modern conditions, and leads to a consideration of the economic changes wrought by the expansion of England in the seventeenth and eighteenth centuries. The reader is thus brought to the period of industrial revolution, with its inventions in mechanics, and the subsequent growth of the factory system, and the modifications of social and industrial life with the extension of government control, and the rise of voluntary association of capital and labor.

It is reported in New York that the Southern Pacific Railway Co. will probably issue \$10,000,000 or more in bonds to pay the cost of equipping all of its locomotives with apparatus for burning oil as fuel.

CONSTRUCTION DEPARTMENT.

THE MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery Wanted." In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the Manufacturers' Record.

It often occurs that the organization of a new company in a town is not known by the postmaster, and hence letters addressed to the company are returned marked "not known." The Manufacturers' Record reports the first organization of all companies and our readers, in seeking to get into communication with them, should be very careful in deciding how to address them, and it is often advisable to add the names of one or more incorporators as an aid to the postmaster in delivering mail.

ALABAMA.

Alabama—Timber Lands.—C. D. Danhere of Chicago has purchased for \$85,000 from T. P. Ayers of Nashville, Tenn., a tract of 13,000 acres of timber lands in Alabama.

Birmingham—Brick Works.—Incorporated: Hardman-Christopher Brick Manufacturing Co., capital stock \$3000, by James U. Hardman, Kate V. Hardman and H. P. Christopher.

Birmingham—Land Company.—C. A. Jones, E. T. Rice and F. G. Sheppard have incorporated the Uncle Dick Jones Land Co., with capital stock of \$20,000, for land developments.

Birmingham—Iron-tubing Plant.—Alabama Tube & Iron Co., recently organized by F. L. Clark and V. A. Moore, has purchased and will put in operation, after improvements, the Helena Rolling Mills; will also add buildings and machinery for gas and other tubing works. Plans for structures prepared by J. W. Golucke & Co. of Atlanta, Ga.

Huntsville—Oil Wells.—Southern Oil Co., reported incorporated lately, has changed name to Huntsville Oil Co. and organized with S. L. Whitton, president; S. R. Cruse, secretary, and O. B. Patton, treasurer.

Huntsville—Well-drilling Company.—Huntsville Deep Well Drilling Co. has been organized to contract for boring wells; machinery said to have been bought.

Mobile—Ice Factory.—Southern Coal Co., 80 St. Francis street, will build an ice factory.*

Mobile—Gas-plant Improvements.—It is announced that the Mobile Light & Railroad Co. and the Mobile Gas Light Co. will consolidate, and that important and extensive improvements to the plant will follow.

Mobile—Lumber Mill.—J. T. McKeon, Edwin C. Wheat, Bart L. Stafford and Harry T. Smith have incorporated East Side Lumber Co., capital stock \$10,000, to operate an established saw-mill.

Springville—Piano-hammer Factory.—Pressley Piano Hammer Co. will manufacture patented piano hammers.*

Talladega—Broom Factory.—C. F. Flowers contemplates installing a broom factory.*

Talladega—Cold-storage Plant.—R. H. Whitley contemplates installing a refrigerating and cold-storage plant.*

Thomas—Oil Wells.—Houghton Oil Co. has been organized by Reuben F. Kolb and others to drill for oil.

ARKANSAS.

Bollinger—Lumber Mill.—Kress City Lumber Co. will at once rebuild its lumber mills, recently burned; capacity daily will be 75,000 feet.

Gilham—Antimony Company.—Incorporated: Star Antimony Co., capital stock \$500,000, by J. S. Maloney, John Paul, L. Underwood and W. F. Stotts.

Little Rock—Ice Company.—Merchants' Ice Co., capital stock \$7025, has been incorporated, with C. J. Langston, president, and James W. Langston, secretary.

Little Rock—Ice Company.—Incorporated: Merchants' Ice Co., capital \$20,000, by C. J. Lupton and others.

Little Rock—Electric-light Plant.—City is considering an expenditure of \$25,000 to enlarge and improve lighting plant.

Newport—Ice Plant.—T. J. Watson is interested in the proposed erection of an ice plant.

Texarkana—Brick Company.—Incorporated: Texarkana Brick Co., capital stock \$25,000, by Geo. W. Foulke (president), E. N. Maxwell and W. L. Hayden.

Yellville—Electric Plant.—Incorporated: Yellville Electric Light & Power Co., capital stock \$50,000, by W. F. Cleveland, John F. Pitt, J. E. Lemen, Alf Wingate and others.

FLORIDA.

Jacksonville—Building Supplies.—Florida Building Supply Co. has been organized at 38 West Bay street to deal in building supplies; Edw. Anderson, president, and S. A. Marshall, manager.

Pensacola—Oil Wells.—J. C. Tettersen, S. C. Cobb and Sol Cahn will bore for oil; contract for drilling reported awarded.

Tampa—Lumber Mills.—Incorporated to operate lumber mills: Jetton-Dekle Lumber Co., with capital stock of \$30,000, by M. M. Jetton, Lee Dekle, J. C. Griswell and Hamilton McFarlan.

GEORGIA.

Atlanta—Photograph Materials.—Incorporated: Southern Photo-Material Co., capital stock \$10,000.

Augusta—Fertilizer Factory.—Frederick B. Pope, Porter Fleming, J. M. Berry, W. H. Fleming and others have incorporated Southern States Phosphate & Fertilizer Co., capital stock \$300,000, and will build acid phosphate and fertilizer works.

Cartersville—Gold Mines.—Incorporated: Stegall Gold Mining Co., capital stock \$100,000, for the development of gold mines, etc., by John P. Stegall, J. H. Vivion, T. R. Jones and Paul A. Stegall.

Cartersville—Printing Plant.—Cartersville Printing Co. has been incorporated, with capital stock of \$5000, to conduct printing plant, by H. A. Chapman, D. B. Freeman and A. M. Willingham.

Cedartown—Iron Lands.—Woodstock Iron Co. of Anniston, Ala., has purchased about sixty acres of iron lands near Cedartown for immediate development.

De Soto—Fruit Cultivation, Canneries, Cotton Mill, etc.—Incorporated: De Soto Fruit, Agricultural & Manufacturing Co., capital stock \$60,000, to cultivate and pack fruit, can vegetables, erect cotton mill, oil mill, etc., by C. B. Duffey of Worcester, Mass.; T. B. Clements of Fairbault, Minn.; J. A. Ansley of Americus, Ga., and others.

Douglas—Ice Plant.—Douglas Ice & Power Co., recently reported incorporated, has 10-ton plant in operation.

Griffin—Electric-light Plant.—City has let contract for installation of \$3879 worth of additional machinery in its electric-light plant. "The Mayor" can probably inform.

Griffin—Cotton Mill.—Rushton Cotton Mills, reported last week as to double plant, will erect 146-foot addition and install 6000 spindles and 128 looms at a cost of \$65,000.

Lavonia—Oil Mill.—Farmers' Oil & Fertilizer Co., capital \$15,000, has been organized to build cottonseed-oil mill; T. F. Allison, president; J. W. Cannon, secretary.

Rome—Oil Wells.—John Seay, J. W. Roundsville, W. P. Simpson and J. A. Glover are organizing company to drill for oil.

Rome—Foundry and Machine Shop.—An established foundry and machine shop, capitalized at \$15,000, has made a proposition for

the removal of its plant to Rome. John H. Reynolds, C. B. Goetchius and J. A. Glover are interested.

Savannah—Marine Railway.—There is talk of the proposed construction of marine railways, and probably Wm. Kelly & Son are cognizant of the facts.

Stilesboro—Cotton Gins.—Raccoon Creek Gin Co. has been incorporated, with capital stock of \$5000, to erect cotton gins, etc., by W. O. Henderson, John S. Leake, T. R. Hammond, J. M. Jackson and others.

Waycross—Pants Factory.—Jones Pants Manufacturing Co. (operating pants factory) has incorporated, and will double capacity of plant; J. A. Jones, president.

KENTUCKY.

Ashland—Coal and Iron Company.—Midland Coal & Iron Co. has been incorporated, with capital stock of \$50,000, by A. Foley, A. J. Irwin and W. C. Davidson.

Frankfort—Lead and Zinc Lands.—Thos. Jett of Illinois has purchased for development several hundred acres of lead and zinc lands.

Louisville—Brewery.—Chas. D. Meyer has made plans for an addition to J. F. Oertel's brewery.

Louisville—Steel Mills.—Henry Stanyon (of Stanyon-Miller Engineering Co., 701 Empire Building, Pittsburg, Pa.) states that the industry for which he is investigating, noted during the week, will probably be located; it will consist of open-hearth furnace, blooming, rod, wire and nail mills.*

Somerset—Ice Plant.—Somerset Ice Co. will build 50-ton ice plant.*

Somerset—Gas and Oil Wells.—Chartered: Monarch Oil & Gas Co., capital stock \$250,000, by Geo. P. Sallee, president, and others to develop for gas and oil 14,000 acres of land in Pulaski county.

Sunnybrook—Oil Wells.—Kentucky & Indiana Oil Co., reported recently as to drill for oil near Sunnybrook, has been organized at New Albany, Ind., with capital stock of \$250,000; J. P. Hornaday of Somerset, Ky., president, and A. P. Hausa, secretary.

Wickliffe—Oil Wells.—E. B. Little and M. R. Porter of Union City, Tenn., contemplate drilling for oil near Wickliffe.

LOUISIANA.

Abbeville—Machine Shop.—L. P. Hacker of New Iberia, La., will establish a machine shop in Abbeville.

Alexandria—Cotton Mill.—F. M. Welch is endeavoring to raise \$30,000 to secure the removal of a cotton mill to Alexandria.

Franklin—Cannery.—F. C. Lore of New Orleans, La., is interested in the establishment of a cannery factory at Franklin.

Kentwood—Ice Plant.—Kentwood Ice Manufacturing & Bottling Co. will rebuild its burned plant. Capital stock will be increased from \$5000 to \$25,000, and plant will be from fifteen to twenty tons capacity.

New Orleans—Drug Company.—R. E. Reyes, A. S. Folse and others have incorporated the Acme Association, Limited, to conduct general drug business; capital stock is \$5000.

New Orleans—Cigar Factory.—American Cigar Co. (main offices in New York) will erect an eight or ten-story building for cigar factory of large capacity; E. T. Ware and F. E. Kelsey, representing company in this, are registered at St. Charles Hotel. It is also said company will triple capacity of the Hershelm branch, now 45,000 cigars annually.

New Orleans—Abattoir.—New Orleans Butchers' Co-operative Abattoir Co., reported incorporated recently, has bought plant of New Orleans Abattoir Co. for \$25,000; will improve, enlarge and operate the abattoir.

New Orleans—Gas Plant.—New Orleans Gas Lighting Co. has ordered additional machinery and apparatus to increase its plant's capacity by 1,800,000 feet daily.

MARYLAND.

Aberdeen—Brick Works.—It is rumored that brick works will be established on Mrs. John H. Baker's land.

Baltimore—Vault.—Belvidere Building Co., previously reported to erect a \$1,000,000 hotel, will construct \$5000 vault under ground for engines and other machinery.

Baltimore—Barge Company.—Baltimore & Roston Barge Co., capital stock \$250,000, has

been incorporated in West Virginia by Hamilton Murrell and others.

Baltimore—Coke Ovens.—Maryland Steel Co. will erect at Sparrow's Point 200 by-product coke ovens of 900 to 1200 tons daily capacity, also auxiliary plants, such as gas works, ammonia plant, tank system for storing tar, tar-barrel factory, etc. About \$750,000 will be expended. F. W. Wood is president.

Baltimore—Tobacco Factory.—Neudecker Tobacco Co., capital stock \$300,000, has been incorporated to enlarge and continue the tobacco-manufacturing business of L. H. Neudecker of 701 East Lombard street; L. H. Neudecker, president, and F. L. Le Compte, vice-president.

Baltimore—Land Improvements.—Incorporated: Maryland Land & Improvement Co., capital \$10,000, by Ernest Lyons, McHenry J. Naylor, Henry S. Cummings and others.

Hagerstown—Silk Mill.—Collinge, Nolan & Co. of Paterson, N. J., have offered to rebuild their Hagerstown silk mill for a bonus of \$4000 towards erecting a \$11,000 building.

Mt. Savage—Mercantile.—Michael A. Brannon, Edw. A. Miller and others have incorporated R. H. Brannon Co., with capital stock of \$15,000.

Washington, D. C.—Patent Partition Factory.—Horatio A. Gaplin, Emory R. Johnson and others of Washington are incorporators of the Reavis Fireproofing & Partition Co., reported last week under Alexandria, Va.

MISSISSIPPI.

Aberdeen—Cotton Mill.—Hamp E. Reynolds, reported lately as interested in forming mill company, states that a \$250,000 corporation on the co-operative plan is proposed.

Bond—Electric-light Plant, etc.—M. J. Bethune, W. J. Evans, Preston Bond and others have incorporated the Bond Improvement Co., with capital stock of \$2500, for erection and operation of electric-light plants, gas plants, hotels, etc.

Durant—Broom Factory.—J. A. Hooke, from Tennessee, will establish a broom factory.

Gloster—Electric-light and Water Works.—City has voted affirmatively on proposed issuance of \$23,000 of bonds for construction of water-works and electric-light plant. Address "The Mayor."

Holly Springs—Ice Factory.—Company lately reported to be formed has incorporated as the Holly Springs Ice Factory, with capital stock of \$25,000, to build plant; incorporators, I. C. Levy, Jos. A. Sternberger, J. C. Totten, L. A. Rather and others.

Ocean Springs—Water-works.—Company noted last week as proposed will organize as People's Water-Works Co., with Joseph Kotzum, president.

West Point—Fruit Evaporator.—B. S. Orchard Co. will rebuild its burned fruit evaporator for next season's crop; will also increase orchard from 40,000 to 200,000 trees.

MISSOURI.

Neosho—Mercantile.—Chartered: Jones-Davis Mercantile Co., capital stock \$15,000, by R. B. Jones and others.

St. Louis—Manufacturing.—Incorporated: A. Laban Manufacturing Co., capital stock \$7000, by Alexander Laban, B. Hirsch and I. Cohen.

St. Louis—Glue Company.—Incorporated: Clarkson Glue Co., capital \$10,000, by J. H. Clarkson, W. T. Clarkson and others.

St. Louis—Fruit Company.—Chartered: Milligan-Florida Fruit Co., with capital stock of \$10,000, by B. Milligan, A. Florida and others.

St. Louis—Fish and Oyster Company.—Chartered: Meletio Fish & Oyster Co., with capital stock of \$10,000, by W. A. Meletio and others.

St. Louis—Cement Works.—St. Louis Portland Cement Co. has been incorporated, with capital stock of \$1,850,000, by J. C. Robinson, F. R. Bissell, G. M. von Schraeder and others, and will erect Portland cement plant.

St. Louis—Real Estate.—Chartered: Boone Land Co., with capital stock of \$25,000, by Odon Guitart, Jr., K. A. Boyle and others.

NORTH CAROLINA.

Beaufort—Packing-house.—Incorporated: Enterprise Packing Co., capital stock \$6000, to pack oysters, crabs, etc., by W. S. Chad-

wick, B. L. Jones, I. E. Ramsey, N. W. Taylor, B. S. Saunders and others.

Beaufort—Steamboat Line.—Chartered: Beaufort, Morehead City & Ocracoke Steamboat Co., capital stock \$50,000, by W. S. Chadwick, B. L. Jones, H. C. Jones, N. W. Taylor and others, to establish steamboat lines, build wharves, etc.

Charlotte—Road Improvements.—"County Commissioners" will order an election to vote on issuing \$300,000 of bonds for road improvements.

Concord—Smelting Plant.—H. B. Meech of New York, mentioned recently as proposing the erection of a smelting plant near Concord, represents the United States Smelting & Refining Co. Endeavors are now being made for reopening abandoned mines, erecting the smelting plant, etc.

Concord—Woodworking Factory.—Washburn Bros. are reported as to erect a factory for sash, doors and blinds.

Franklin—Saw-mills, etc.—Nantahala Company, reported incorporated lately, has capital stock of \$200,000. S. P. Ravenel, Jr., of Highlands, N. C.; Daniel Ravenel of Charleston, S. C., and Robert P. Harris of Franklin are the incorporators, and will conduct saw-mills, general woodworking and mining business.

Greensboro—Brick Works.—Incorporated: Greensboro Brick Co., capital stock \$25,000, by P. R. Coble, W. P. Hutton and N. A. Hanner, to manufacture brick, tile, pipes, etc.

Greensboro—Drug Company.—Chartered: Holton-Helms Company, with capital stock of \$100,000, by C. E. Holton, J. D. Helms and others.

Henderson—Granite Quarry.—Stewart Construction Co. of Columbia, S. C., will develop granite quarry; W. J. Waters, local superintendent.

High Point—Mercantile.—Chartered: Tomlinson Company, to conduct general brokerage and commission business, by S. H. Tomlinson and others; capital \$3000.

Jesup—Saw-mill, etc.—W. D. Harrington contemplates building saw and shuttle mills.

Milburnie (P. O. at Raleigh)—Grist Mill.—Raleigh Ice & Electric Co. will build a grist mill.

North Carolina—Copper and Gold Mines.—Person Consolidated Copper & Gold Mines Co. has been incorporated at Albany, N. Y., with capital stock of \$1,000,000, to operate copper and gold mines in North Carolina and elsewhere. Names of interested parties not made public yet.

Red Springs—Mercantile.—Chartered: Robeson Mercantile Co., capital stock \$40,000, by W. H. Sikes, W. J. Johnson and others.

Rocky Mount—Machine Shops.—W. L. Petty Company has been incorporated to make and deal in tools, appliances and machinery, by Hugh Campbell of Richmond, Va.; W. L. Petty, Jr., E. L. Chavasse and others; capital stock is \$100,000.

Sellsbury—Smelter.—It is rumored that the United States Smelting & Refining Co. will build a gold-smelting plant.

Scotland Neck—Water Supply.—The town has at once decided to establish water supply; J. E. Shields, mayor.

Shelby—Woodworking Factory.—Thompson & Co. will build a sash, door and blind factory.

Wilmington—Lumber Mill.—S. & W. H. Northrop will rehabilitate and improve with new machinery their lumber mill. Northern parties have become interested.

Winston—Knitting Mill.—J. W. Hanes will establish mill for manufacturing hosiery. Machinery has been bought.

Washington—Carriage Factory.—A. G. Cox Manufacturing Co. has paid-in capital of \$20,000 (not \$5000, as reported recently).

SOUTH CAROLINA.

Bennettsville—Printing.—Incorporated: Bennettsville Printing Co., capital \$1000, by H. B. Crossland, W. W. Coker and J. G. Crossland.

Bennettsville—Mercantile.—Chartered: Moore Bros., with capital stock of \$10,000, by J. A. W. Moore and others.

Charleston—Creamery.—Chartered: Mutual Creamery Co., capital \$5000, by H. B. Jennings and G. S. Jennings.

Charleston—Hardware Company.—Chartered: Coleman-Wagener Hardware Co., capital stock \$50,000, by M. W. Coleman and Geo. A. Wagener.

Columbia—Bridge.—Southern Railway, Frank S. Gannon, general manager, Washington, D. C., will soon begin work on its proposed \$30,000 bridge across Congaree river at Columbia, contract for which was recently awarded the Phoenix Bridge Co. of Phoenixville, Pa.

Columbia.—Chartered: Carolina Patent Co., with capital stock of \$5000, by N. W. Brooker and others.

Cross Hill—Oil Mill.—Cross Mill Co., reported incorporated last week, is building cottonseed-oil mill. J. S. Hill is superintendent.

Florence—Hardware Company.—Florence Hardware Co. has been incorporated, with capital stock of \$25,000, by A. W. Welling and others.

Gaffney—Monazite Plant.—Carolina Monazite Co. of Gloucester, N. J., will erect a plant at Gaffney for the purpose of cleaning monazite sand; capacity three to five tons per day.

Georgetown—Publishing.—E. W. Kaminski, D. S. Black, J. W. Doar and others have incorporated Outlook Publishing Co., with capital stock of \$5000.

Greenwood—Lumber Manufacturing.—Incorporated: Greenwood Lumber & Manufacturing Co., capital stock \$5000, by S. B. Marshall, J. R. Abney and S. P. Jones.

Greenwood—Planing Mill, etc.—W. J. Sneed of Richmond and E. K. Sneed will establish lumber and planing mill at Greenwood, with capital of \$15,000.

Greenwood—Ice Factory.—H. V. R. Schraeder has enlarged his ice factory and established soda-water bottling works.

Langley—Knitting Mill.—George Swearingen and associates will build a knitting mill for hosiery.

Piercetown—Flour Mill.—S. C. George of Denver, S. C., has purchased, will add machinery to and operate the Watkins & Co. 40-barrel flour mill.

Rock Hill—Cannery.—Winthrop College will establish a cannery.

Rock Hill—Buggy Company.—Rock Hill Buggy Co. will increase capital from \$75,000 to \$250,000.

Williamston—Drug Company.—Chartered: Williamston Drug Co., capital stock \$5000, by J. P. Gossett, B. C. Martin and H. C. Wilson.

Yorkville—Cotton Mill.—Sutro Cotton Mill has been reorganized with G. H. O'Leary, president, capital stock \$40,000, and will buy additional machinery; now has 5000 spindles.

TENNESSEE.

Athens—Furniture Factory.—H. E. Cortland, mentioned in item last week, is of Knoxville, and states that he has bought the Athens Furniture Co. and will remove his Knoxville plant to Athens. Address H. G. Cortland at New Euclid Hotel, Athens.

Chattanooga—Machine Shop.—Lane Lyle, reported recently to build a machine shop, has incorporated (with W. S. Brownson, Alex. Lyle, L. M. Stone and Francis Martin) the Standard Machinery Co., with capital stock of \$20,000.

Chattanooga—Coffin Factory.—Carlin Furniture & Manufacturing Co. has purchased the Chickamauga Undertaking Co., and will introduce the manufacture of coffins.

Chattanooga—Hamestring Factory.—The company reported last week as forming to manufacture patent iron hamestrings will contract for manufacture of its specialty or may build foundry. Geo. W. Chamlee, 7 McConnell Block, can be addressed.

Clarksville—Ice Factory.—The organization of a co-operative ice-factory company is talked of.

Columbia—Bottling Works.—C. J. Kebar has ordered a new equipment for his bottling works.

Crossville—Saw-mills.—Griffith Lumber Co. will erect two additional mills, and contemplates constructing a 35-mile telephone line.

Falkville—Carriage Factory.—Flowers & Son will build carriage factory.

Falls Branch—Zinc Lands.—James A. Dickey of Bristol, Tenn., writes that he has leased and developed a large boundary of zinc lands near Falls Branch, has sublet 1000 acres, and has 2000 acres remaining for development.

Galesboro—Flour Mill.—S. B. Fowler will build a 50 or 75-barrel flour and grist mill.

Gallatin—Electric-light and Water Works. The city council has adopted a resolution for the issuance of \$8000 of bonds for water-works and electric-light plant improvements. Address "The Mayor."

Greenville—Bridges.—County court has decided to expend \$20,000 for the reconstruction of bridges damaged by the recent floods. L. C. Haynes, A. J. Frazier and James Allen will arrange for asking bids.

Jonesboro—Lumber Mill.—Chartered: Eureka Lumber Co., with capital stock of \$10,000, by John H. Bowman, S. C. Williams, T. L. Evans and others.

Knoxville—Coal Mines.—Poplar Creek Coal & Iron Co., E. J. Sanford, president, will

arrange for developing 8000 acres of coal lands.

Knoxville—Ice Plant.—Knoxville Ice Co. contemplates installing 50-ton ice plant in connection with present plant.

Livingston—Flour Mill.—John Bilbney is building roller flour mill.

Memphis—Improvement Company.—James Anthony, E. A. Neely, Thos. Neely, C. R. White and E. N. Amerine have incorporated James Anthony Co., with capital of \$1000, to promote immigration, improve lands for towns, etc.

Morristown—Ochre Deposits.—It is reported that A. J. Cury has discovered ochre deposits on his land.

Nashville—Wagon Works.—W. M. Meeklan of Olean, N. Y., proposes the establishment of works to manufacture his patent wagon and stock. A \$125,000 stock company has been formed in the North, and Nashville investors are asked to take \$65,000 of the stock. John Bowerlin, Jesse H. Thomas and W. C. Hersig are a committee to solicit stock.

Tullahoma—Flour Mill.—J. H. Banks of Sharon, Tenn., and others will establish a flour mill at Tullahoma.

TEXAS.

Austin—Lumber Company.—Drake Lumber Co., capital stock \$10,000, has been incorporated by Carl F. Drake, John H. Comer, D. R. Stewart and J. Web Davis.

Austin—Cottonseed-hulling Plant.—S. Netter, A. Geismar & Co. (not Simon Geismar & Co., as stated recently) have enlarged by 100 tons capacity their cottonseed-hulling plant. Manesse Lazare is local manager; firm's main office at 10 Rue Coquillere, Paris, France.

Bay City—Irrigation System.—Chartered: Colorado Canal Co., capital stock \$50,000, to establish irrigation system, by Henry Rugely, J. A. Erwin and S. J. Ellis of Bay City, and John F. Holt of Caney.

Bay City—Bridge.—Matagorda county will consider on August 12 as to surveys, estimates, etc., for the proposed bridge, for which \$40,000 bonds was voted recently. Address "County Clerk."

Beaumont—Oil Wells.—Chartered: People's Oil Co., capital stock \$500,000, to drill for oil, by Clyde A. Miller of Seaton, Ill.; Wm. L. Duff of Aledo, Ill.; Morris G. Knight of Beaumont and others.

Beaumont—Oil Wells, Pipe Line, etc.—Chartered: Bennett Oil, Pipe Line & Development Co., capital stock \$50,000, to drill for oil, construct pipe lines, etc.; incorporators, Chas. H. Ludington, John H. Morrison, Amasa R. Angell, all of New York city; Stephen C. Millard and Wm. P. Kennedy of Binghamton, N. Y., and Chas. P. Bennett of Lake Park, Iowa.

Beaumont—Oil Wells.—Incorporated: Diamond Crude Oil Co., capital stock \$1,000,000, by Frank Y. Locke and A. W. Harris of Sibley, Iowa; Albert Dollemayer of Minneapolis, Minn.; G. H. Mance of Duluth, Minn.; A. H. Gale of Mason City, Iowa; purpose, to drill for oil, construct pipe lines, etc.

Beaumont—Oil Wells.—Bradley Oil Co., with capital stock of \$300,000, has been incorporated by W. E. Bradley, C. H. Shoemaker, Arthur Fox and others.

Bonham—Ice Factory.—Bonham Ice Co. will increase capital stock from \$20,000 to \$40,000 and double its factory of twenty tons capacity.

Cooper—Lumber Company.—Weldon-Smith Lumber Co., capital stock \$10,000, has been chartered by S. C. Ratliff, J. B. Clem and James A. Smith.

Cooper—Mercantile.—Chartered: Ratliff-Morrill Mercantile Co., capital \$12,000, by S. C. Ratliff and others.

Corsicana—Lumber Company.—McCammon & Lang Lumber Co. will increase capital from \$10,000 to \$20,000.

Corsicana—Oil and Coal Company.—Chartered: Morgan Oil & Coal Co., with capital stock of \$50,000, by W. M. Morgan, J. D. Carroll, W. S. Collier and others.

Dallas—Candy Factory.—Frank A. Menne Candy Co. will establish factory at Jefferson and Calhoun streets.

Denton—Cotton Gins.—Chartered: Planters' Gin Co., capital stock \$10,000, to erect cotton gins, by W. R. Allen, C. F. Witherpoon and P. R. Freeman.

El Paso—Smelter.—Lowder Smelter Co. of Leadville, Col., contemplates the erection of a smelter at El Paso.

El Paso—Oil Wells.—Artesian Oil Co., with capital stock of \$100,000, has been chartered by J. P. Ramsey, H. B. Stevens, J. C. Wilmarth and others.

Emory—Emory Mill & Gin Co., reported incorporated recently, will soon have plant

completed with exception of lighting equipment; electricity may be used; A. P. Fitzgerald, president.

Farmersville—Milling.—Chartered: Farmersville Milling Co., with capital stock of \$30,000, by L. E. Bumpass, N. B. Feary and W. S. Aston.

Farmersville—Electric Light Plant.—Chartered: Farmersville Electric Light Co., with capital stock of \$15,000, by H. L. Carver, H. D. Honaker and L. E. Bumpass.

Galesville—Brick Company.—N. N. Edwards and E. D. Young have incorporated Galesville Brick Co., with capital stock of \$20,000.

Hearne—Ice Plant.—Planters' Oil Co. will build a 15-ton ice plant in connection with established oil mill.

Hearne—Oil Wells.—Chartered: Manhattan & Lone Star Oil & Mining Co., capital stock \$120,000, to drill for oil, by Henry B. Eastwood of Hearne, Solomon Steinfeld, Simon Uhlfelder and others of New York city.

Houston—Railroad Shops.—Southern Pacific Company will enlarge and improve its railroad shops, to include erection of 100x140-foot foundry, 120x240-foot coach and wood-working shop, 70x140-foot addition to present machine shops, 50x50-foot addition to pattern shops, etc.; W. G. Van Vleck, resident manager.

Houston—Cotton Compress.—Geo. H. McFadden & Bro. (main office in Philadelphia, Pa.) will build, as reported last week, a cotton compress; plant will cost about \$100,000.

Houston—Drug Company.—Bayou City Drug Co. has been chartered, with capital stock of \$5000, by E. B. Ramsay and others.

Houston—Oil Wells.—Chicago-Texas Oil Syndicate has been incorporated, with capital stock of \$1,000,000, by W. C. Moore of Liberty, S. R. Perryman, O. C. Drew of Houston and others.

Houston—Oil Wells.—Chartered: Chicago-Houston Oil Syndicate, capital stock \$1,000,000, by W. C. Moore, S. R. Perryman, O. C. Drew, each of Houston, Anson E. Meador and Perry A. Hull of Chicago.

Houston—Artificial Stone Works.—Brower Stone & Building Co. has been incorporated, with capital stock of \$100,000, to manufacture artificial stone, etc.; B. W. Camp, president; W. E. Humphreys, secretary-manager, and C. D. Dillingham, treasurer.

Houston—Road Improvements.—Harris county is completing arrangements to award contracts for the road improvements, for which \$600,000 was previously made available. Plans and specifications have been prepared, and bids will be received in August. Wm. Bradburn, county surveyor, will furnish information to inquirers.

Jacksboro—Mercantile.—Chartered: Jacksboro Mercantile Co., with capital stock of \$20,000, by J. W. and D. L. Knox and T. D. Sporter.

Kaufman—Water-works.—City has voted affirmatively on the proposed issuance of \$20,000 bonds for construction of water-works. Address "The Mayor."

Llano—Iron Mines.—Llano Iron Mining Co., capital stock \$250,000, was reported last week as chartered by Richard P. Travers and others of Chicago. Messrs. Kruse & Travers, Old Colony Building, Chicago, have just purchased the Iron Mountain, near Llano, and doubtless the above company is being formed by them to develop the property.

Mart—Oil Mill.—Marlin (Texas) Oil Co.'s increase of capital, noted last week, to build cottonseed-oil mill in Mart will be from \$100,000 to \$150,000.

Paris—Cotton Compress.—Chartered: Red River Compress Co., capital stock \$50,000, by George McFadden and Wm. P. Jenks of Philadelphia, Pa.; W. J. Neale of Waco, S. W. Wilbur and A. H. O'Neill of Paris.

Rosebud—Cotton-oil Company.—Chartered: Rosebud Cotton & Oil Co., with capital stock of \$75,000, by T. O. Martin, G. W. Riddle and J. J. Culbertson.

San Antonio—Mercantile.—Chartered: Alex. Sartor, capital \$20,000, by W. A. S. Sartor and associates.

San Antonio—Laundry.—Chartered: White Star Laundry Co., capital stock \$20,000, by Lufe Harpole, James Carruthers, S. G. Rehtel and R. S. Roberson.

San Antonio—Mantel Company.—Incorporated: Texas Mantel & Decorating Co., capital stock \$30,000, by J. H. Erb, J. A. Conaway, Geo. C. Williams and R. S. Roberson.

Terrell—Sewerage.—New Odorless Sewerage Co., reported recently as incorporated, will construct system of sewerage at once. Address Matthew Cartwright.

Texarkana—Mercantile.—Chartered: J. Weisman Co., capital stock \$40,000, by Jos. Weisman and others.

Thorndale—Round-bale Compress.—It is rumored that the American Cotton Co. (main office in New York) will build a round-bale compress.

Timpson—Oil Wells and Mines.—Chartered: Attoyac Oil & Mining Co., with capital stock of \$300,000, to drill for oil and develop mines of all kinds; incorporators, C. E. Sanford, W. G. Rugely, E. B. Remberd, J. E. Blankenship and others.

Valley Mills—Gln.—Weld & Neville will erect a round-bale gin.

VIRGINIA.

Alexandria—Manganese Mines, etc.—Cedar Creek Manganese Co., reported recently as incorporated, has organized for purchasing and developing manganese, coal, iron, copper and other minerals. Among those interested are S. T. Hoffner, John Hershberger, H. P. Fahrney and E. G. Fahrney, all of Frederick, Md., and Maurice E. Michael of Washington, D. C. Address H. P. Fahrney.*

Buena Vista—Woolen Mill.—C. N. McLean of Philadelphia has optioned land proposed to be used as site for additions to the Buena Vista Woolen Mills, which he bought recently; new machinery reported ordered.

Compton—Manganese Mines.—W. T. Smith and D. W. Murphy of Columbus, Ohio, and the Illinois Steel Co. of Chicago contemplate the purchase and development of manganese deposits near Compton. Preliminary shafts have been sunk.

Craig City—Coal and Iron Lands.—Eastern capitalists have about concluded the purchase of 20,000 acres of coal and iron lands from the Virginia Manganese, Iron & Coal Co. for \$150,000. Extensive developments are to be instituted. Probably Geo. W. Connell of Charleston, W. Va., or Major Noyes Rand of El Paso, Texas, can give information.

Fredericksburg—Granite Quarry.—Cartwright & Davis are making improvements to facilitate developments and shipment at their granite quarry.

Fredericksburg—Plow Works.—Chas. E. Hunter Farmers' Friend Plow Works has been organized, with John T. Knight, president; A. Randolph Howard, treasurer, and W. L. Burruss, manager; purchased for \$12,000 and will operate the Hunter Foundry.

Norfolk—Jewelry Company.—Chartered: Gem Jewelry Co., capital stock \$25,000, with L. Shefsky, president, and H. Wagenheim, secretary.

Norfolk—Pie Factory.—Jefferson Pie Co. has been chartered, with capital stock of \$500, to bake pies, etc.; L. E. Woodsend, general manager.

Petersburg—Cotton Mill.—Pocahontas Cotton Mills will make improvements, including the installation of a turbine wheel, etc. About \$7000 will be expended.

Radford—Pipe Works.—Glamorgan Pipe & Foundry Co. of Lynchburg has purchased and is now operating the Radford Pipe & Foundry Co.'s plant of 150 tons capacity daily; betterments and increases in output may be made.

Richmond—Snuff Mill.—Independent Snuff Co. has effected permanent organization with Pascal Davis, president, and E. T. Crump, general manager; building has been secured and machinery is being installed.

Richmond—Bottling Works.—J. Scott Parrish, J. Stewart Bryan and Berkeley Williams are interested in organization of a stock company, with capital of \$125,000, for developing lithia springs.

Richmond—Manufacturing Enterprises.—J. Thompson Brown & Co. are negotiating for the establishment of two large enterprises.

Richmond—Sulphur and Pyrites Mines.—Beverly T. Crump, S. L. Kelley and others are forming a company to develop pyrites and sulphur mines in Louisa county; shafts have been sunk.

Richmond—Cigar Factories.—American Tobacco Co. (general office in New York city) has received plans and specifications for its proposed factory building, brick, mill construction, six stories, ninety feet high, 132x200 feet, with ell 60x344 feet, to cost from \$100,000 to \$150,000. Lockwood, Greene & Co. of Boston made plans.

Richmond—Iron and Nail Works.—It is reported that John Skelton Williams and others have purchased control of the Old Dominion Iron and Nail Works for about \$160,000 for the purpose of making enlargements and improvements and establishing other manufacturing plants to utilize power furnished by the Virginia Electric Railway & Development Co.

Richmond—Oil Wells.—Chartered: Old Dominion Oil Co., capital stock \$100,000, to drill for oil, with E. M. Pickering, president; M. P. Benson, secretary, and Jacob Nine, treasurer.

Roanoke—Oil Wells.—W. A. Pedigo, S. Harris Hoge, Henry Scholz, Horace M. Engle and others have organized the Virginia Petroleum Co., with capital stock of \$20,000, to drill for oil.

WEST VIRGINIA.

Charleston—Coal Mines.—James F. Brown, M. Jackson, V. L. Black and others have incorporated the Northern Coal & Coke Co., with capital stock of \$500,000, for mining coal and manufacturing coke in West Virginia and Kentucky.

Charleston—Coal Mines.—Pleasants Creek Coal Co., with capital stock of \$200,000, has been incorporated by H. Glenn Greer, C. E. Hawker of Fairmont, Jos. L. Wilson of Baltimore, Md., and others.

Charles Town—Electric Plant.—C. H. Emig of Hanover, Pa., and associates have purchased a water-power near Charles Town with a view to developing it to operate their established electric plant, transmitting the power by wire. A company may be formed to undertake this development and distribute electric-power to factories.

Clarksburg—Ice Plant.—Citizens' Ice Co., recently reported incorporated, will build 35-ton ice plant.

Clarksburg—Coal Mines.—Chartered: Park Coal Co., capital stock \$200,000, by Fleming Howell, T. Moore Jackson, C. Sprigg Sands, Lynn S. Hornor and Millard F. Snider.

Clarksburg—Tinplate Plant.—Jackson Iron & Tinplate Co., reported last week, has selected site and completed arrangements to build its proposed plant. Output will be eighty-two tons every twenty-four hours. Geo. W. Barkman, Second National Bank Building, Hamilton, Ohio, is architect for buildings, and C. C. Moore, 39 Vine street, Columbus, Ohio (not Hamilton Ohio, as erroneously printed last week), can be addressed in reference to machinery.*

Fairmont—Machine Shops, etc.—Baltimore & Ohio Railroad Co. (principal office, Baltimore, Md.) has purchased property in Fairmont, and will commence its additional yard improvements at once. It is also reported the company contemplates removing its Grafton shops to Fairmont.

Powhatan—Coal Lands.—J. N. Pew of Pittsburgh, Pa., has purchased and will develop 10,000 acres of coal lands near Powhatan.

BURNED.

Aberdeen, Ky.—Martin & Reidie's tannery; loss \$50,000.

Boonville, Mo.—Boonville Steam Laundry; loss \$80,000.

Chattanooga, Tenn.—Mountain City Mill Co.'s flour mill; loss \$15,000.

Elizabeth City, N. C.—Crystal Ice & Coal Co.'s factory damaged to extent of \$10,000 by explosion.

Georgetown, Ga.—C. G. Mercer's grist mill; loss \$300.

Gilmerton, Va.—National Cooperage Co.'s barrel-heading plant; loss \$800. Address No. 11 Broadway, New York.

Hartsville, Tenn.—John C. Sanders & Bro.'s flour mill; loss \$300.

Memphis, Tenn.—Memphis Ice Factory.

Montgomery, Ala.—May's Bakery; loss \$700.

Ocran, Va.—Squires Co.'s fish factory; loss \$800.

Petersburg, Va.—W. L. Davis' planing mill; loss \$14,000.

Rocky Creek, Tenn.—Rocky Creek Flouring Mills, Saunders Bros., proprietors; loss \$500.

BUILDING NOTES.

Abbeville, Ga.—Hotel.—Plans and specifications have been prepared for erection of hotel on site of Eureka Hotel, recently burned.

Aiken, S. C.—Building.—W. C. Whitney will erect a 40x84-foot building to cost over \$10,000.

Aiken, S. C.—Stores.—Burrell Bates of Silverton will erect two-story brick stores building 37x75 feet.

Aiken, S. C.—Building.—B. Bates of Silverton, S. C., will erect brick building 75x37 feet in Aiken.*

Algiers, La.—Government Buildings.—M. T. Endicott, chief yards and docks, Navy Department, Washington, D. C., will open bids August 31 for erection of 68x276, 60x224, 40x87 and 40x60-foot buildings at Algiers. Plans and specifications at New York navy-yard, at Algiers and Washington, or will be sent (deposit of \$25 to secure return) on application to Endicott.

Atlanta, Ga.—Commercial Building.—Capt. J. W. English is having plans prepared for three-story brick and stone \$20,000 building.

Baltimore, Md.—Hotel.—J. L. Fowble of Cockeysville has contract to make the \$25,000 improvements to the house at 212 West Monument street. Paul Emmert was noted last week as making plans.

Baltimore, Md.—Residences.—A. B. Morgan has permit to erect nine two-story residences to cost \$5800. J. T. Morgan is the builder.

Baltimore, Md.—Hospital.—Contract for rebuilding the jail hospital, lately noted, has been let to Andrew J. Gengenbach at \$3496.50.

Baltimore, Md.—Building.—John Hiltz has contract for erection of a substation, two stories, for Chesapeake & Potomac Telephone Co.; Jos. Evans Sperry, architect; building will cost \$7000.

Baltimore, Md.—Dwellings.—Maryland Steel Co. is erecting at Sparrow's Point 150 dwellings for employees. F. W. Wood is president.

Baltimore, Md.—Hotel.—Hotel Lexington Company has purchased Hotel Lexington and chartered, with capital stock of \$12,000, by Alexander Hill, Albert J. Owens, Frank H. Hoen and B. Z. McGarrity. Hotel will be enlarged and improved.

Birmingham, Ala.—Office Building.—W. H. Woodward of Weld, Maine, and G. A. Hurley of New York, who recently purchased site at \$100,000 in Birmingham, are having plans made for erection of a 10-story steel fireproof office building 100x100 feet. Eugene Brown of Birmingham is also interested.

Birmingham, Ala.—Dwelling.—W. T. Boyette & Hurley have permit to erect a \$6000 frame dwelling.

Birmingham, Ala.—Office Building.—Smith, Zirkle & Moore have permit to erect three-story brick office and store building.

Birmingham, Ala.—Dwelling.—John V. Coe is having plans prepared by Architect Spink for a \$5000 residence.

Birmingham, Ala.—Dwelling.—Architect Spink is preparing plans for dwelling for A. O. Kehm to cost \$8000.

Birmingham, Ala.—Residence.—Bailey & Howard have permit to erect two-story residence to cost over \$5000.

Cartersville, Ga.—Courthouse.—L. B. Matthews, chairman committee, will open bids September 17 for construction of courthouse, two stories high, 80x108 feet, of brick, terra-cotta, stone and iron. Plans and specifications on file with county commissioners at Cartersville, J. W. Golucke & Co., Atlanta, Ga., and of K. McDonald and J. F. Sheblessy, Louisville, Ky.

Charleston, S. C.—Dwellings.—Holtzelaw Bros. have contract to prepare plans for two frame dwellings to cost \$8000 for estate of James McMenamin.

Charleston, S. C.—Hotel.—Atlantic Beach Hotel Co. will double its hotel for next season on Sullivan's Island; will add three-story pavilion, 200 bathrooms, concert hall, 150 guestrooms, etc.

Charlotte, N. C.—School.—St. Mary's Catholic Convent has had plans prepared for a \$10,000 addition.

Columbia, S. C.—Infirmary.—Dr. A. B. Knowlton will build an infirmary to cost \$25,000.

Columbia, S. C.—Bank Building.—Farmers and Mechanics' Bank has let contract to Nicholas Ittner at about \$30,000 for erection of bank building 60x110 feet, two stories, fireproof, etc.; plans by W. B. Smith Whaley & Co.

Cordele, Ga.—Hotel.—T. A. Collins will rebuild and remodel his hotel, recently burned.

Durant, Miss.—Hotel.—Walter Berryhill of Grenada will build a hotel in Durant.

Durham, N. C.—City Hall.—The city has selected site to cost \$36,000 for erection of city hall and market to cost \$40,000. Address "The Mayor."

Elberton, Ga.—Store.—Dr. N. G. Long will erect drug store.

Fayetteville, W. Va.—Residences.—J. W. St. Clair and S. L. Wakler have each let contract to A. F. Withrow & Co. for erection of residence.

Gaffney, S. C.—Theater, etc.—Bids will be opened August 8 for the erection of the proposed Star Theater and Office Building, after plans by Hook & Sawyer of Charlotte, N. C. Plans and specifications can be seen at office of architects and of Merchants and Planters' Bank in Gaffney. Bond for \$5000 will be required. Address A. N. Wood, treasurer.

Gillsville, Ga.—Residence.—F. W. House will erect dwelling.

Gillsville, Ga.—Store Building.—W. A. Miller will erect two-story store building.

Greensboro, N. C.—Hotel.—J. H. Hopkins is preparing plans for three-story 43x125-foot addition to McAdoo House.

Greenville, S. C.—Warehouse.—Virginia-Carolina Chemical Co. (main office, Richmond, Va.) has let contract to J. F. Grandy for 125x200 addition to warehouse.

Greenville, Tenn.—Jail.—Appropriation of \$2500 is available for improvements to jail. Address "County Clerk."

Greenwood, S. C.—Stable, etc.—Hagood & Son will erect brick stables 60x150 feet.

High Point, N. C.—Residence.—Dr. J. R. Reitzel will build a \$5000 residence.

Hot Springs, Ark.—Building.—S. Mattar & Bro. have awarded contract for erection of a three-story brick building to cost \$13,000.

Houston, Texas—Warehouse.—Weld & Neville will build 165x400-foot warehouse.

Jackson, Miss.—Hotel.—Mrs. James McCordle will erect a hotel to cost \$35,000.

Jackson, Miss.—Hotel.—The Jackson Hotel Co. has adopted plans by A. J. Bryan for its proposed hotel previously reported; structure will have seventy-five guestrooms and cost \$75,000.

Jackson, Miss.—Hotel.—Wirt Adams, R. B. Mims, R. R. Ratchford and others will form company to build \$100,000 hotel, for which A. J. Bryan & Co. were reported recently as preparing plans; will have sixty-six guestrooms.

Jacksonville, Fla.—School.—R. B. Gilkes is preparing plans for two-story frame school of twenty rooms, 100 feet frontage.

Jacksonville, Fla.—Mercantile Buildings.—Arthur B. Gilkes and Alfred Rodd are preparing plans for a four-story 86x100-foot building for B. S. Hubbard, to have elevators, plate-glass windows, etc.; also for two-story 80x121-foot building, to have hot-water heating, plate-glass windows, etc.

Jacksonville, Fla.—Hotel, etc.—Dodge & Cullens have let contract to E. W. Noel and the Baltimore Construction Co. of Baltimore, Md., for the reconstruction of their hotel; about \$315,000 will be expended. G. L. Norman is designing a \$7000 residence for J. L. Munoz.

Jacksonville, Fla.—Schools.—City will rebuild Central Grammar and High School buildings at a cost of \$25,000 to \$30,000. Philip Prioleau is city engineer.

Jonesboro, Ark.—Clubhouse.—J. H. Acklen and associates have contracted with G. W. McBrede for erection of 42-room clubhouse.

Keyser, W. Va.—University Buildings.—West Virginia University has awarded contract to Wm. A. Miller at \$34,884 for erection of buildings after plans by Geo. Albright of Charleston.

Louisville, Ky.—Flats Building.—Mason Maury has made plans for flats building for J. S. Long.

Lynchburg, Va.—Factory Building.—Mrs. Sallie F. Carroll will erect a \$15,000 factory building.

Newport News, Va.—Hotel.—Geo. E. Connell will prepare plans and specifications for a \$25,000 hotel for a Richmond party.

Newport News, Va.—Schools.—School board will open bids August 1 for erection of two frame school buildings at office of P. Thornton Marye, architect, where plans can be seen.

Norfolk, Va.—Hotel.—Mrs. E. F. Daugherty of Danville has purchased for \$73,000 and will improve Washington College building at 186 Granby street as a hotel.

Orange, Texas—Business House.—L. Miller will erect \$40,000 business house.

Orangeburg, S. C.—Hotel.—A 32-room hotel will be built. Probably W. E. Ziegler of Sumter can give information.

Petersburg, Va.—Hotel.—John M. Hanrahan has given contract to J. C. Rowell for erection of hotel and restaurant building.

Pulaski, Tenn.—Store Building.—G. N. Sarven has let contract to Mr. Lytton for erection of store building 65x100 feet, two stories high, plate-glass front, etc.

Reisterstown, Md.—Academy.—John Cowan of Baltimore has received contract for erecting the \$10,500 addition to Hanna More Academy at Reisterstown.

Richmond, Va.—Church.—R. B. Felthaus has contract for improvements to St. Mary's German Catholic Church, to cost \$6000.

Richmond, Va.—Association Building.—Gilbert I. Hunt has contract to build four-story addition for Y. W. C. A. building.

Richmond, Va.—Dwelling.—Phillip Whitlock will erect ten dwellings to cost \$40,000.

Richmond, Va.—Church.—Jos. H. McGuire of New York is preparing plans for the proposed St. Peter Cathedral.

Richmond, Va.—Hotel.—Work has commenced on Franklin street portion of the new Jefferson Hotel to replace the one recently burned. Ellwood & Sons are preparing plans for remainder of structure; will have 450 rooms, 225 baths, heating plant, refrigerating system, opera-house on one corner, etc. Address Jefferson Hotel Co.

Richmond, Va.—Dwelling.—Wm. H. Mercereau, 32 Broadway, New York, is preparing plans for extensive improvements and erection of stables and outhouses at Westover for Mrs. W. M. Ramsey of California.

Richmond, Va.—Hotels.—Mrs. A. D. Atkinson has decided to build a modern hotel, six stories high, containing 300 chambers, 150 bathrooms, etc.; plans now being prepared. T. Zimmerman will erect the Metropolitan Hotel, five stories, fireproof, 150 chambers, all modern improvements; architect not engaged yet.

Sanford, N. C.—Bank Building.—Bank of Sanford will erect a three-story brick building. Address W. J. Edwards.

St. Louis, Mo.—Mercantile Building.—Eames & Young have prepared plans for mercantile building, six stories, 65x100 feet, fireproof construction, electric elevators, etc.

Thorndale, Texas.—Store.—Peter Simank has let contract for erection of brick store building.

Van Buren Ark.—Business Block.—H. F. Meyer will erect brick business block 23x60 feet, one story.

Waycross, Ga.—Office Building.—T. J. Darling has contract for erection of a \$15,000 warehouse.

Weldon, N. C.—Brick Block.—T. L. Emry will erect two-story brick block.

Wheeling, W. Va.—School.—Plans by Gleason & Faris have been accepted for the proposed addition to Ritchie school buildings, to be of brick, two stories, costing about \$26,000. Address "Board of Education."

RAILROAD CONSTRUCTION

Railways.

Arlington, Ga.—A correspondent of the Manufacturers' Record writes that the Georgia, Florida & Alabama, formerly the Georgia Pine Railroad, will probably be extended to Columbus, Ga., as soon as the extension now under contract between Arlington and Cuthbert is completed. J. P. Williams at Savannah is president of the company, and W. B. Hurt at Bainbridge, chief engineer.

Bessemer, Ala.—A plan is under way to construct another electric system between Bessemer, Pratt City, Ensley and other towns in the vicinity. Local capitalists are reported as interested.

Brevard, N. C.—It is reported that the Toxaway Company, which owns the railroad extending between Hendersonville and Brevard, is considering an extension to Asheville from the present terminus. J. F. Hays at Brevard is general manager of the company.

Charleston, S. C.—It is reported that the Seaboard Air Line is negotiating for the purchase of the terminals now owned by the Louisville & Nashville with the view to completing its line to Charleston, as originally intended. The Seaboard Company now owns considerable wharf front and other property.

Dallas, Texas.—The St. Louis Southwestern Railway Co., it is reported, has secured land in various portions of the city for its terminals, and it is understood the company will construct its line to Dallas at an early date. M. L. Lynch at Tyler, Texas, is chief engineer.

Edgefield, S. C.—The plan of constructing an electric railroad between Edgefield and Augusta, a distance of twenty-three miles, is under consideration. James U. Jackson of Augusta is reported as interested.

El Paso, Texas.—It is reported that the Southwestern Railroad of Arizona and the branches which it is proposed to build are included in the El Paso & Southwestern Railroad, which has recently been incorporated in Texas, with a capital stock of \$7,000,000. The system, it is stated, will include a line into the Republic of Mexico, and in all will represent 350 miles. W. M. Wambaugh at Bisbee, Ariz., is engineer.

Floyd, Va.—Floyd and Grayson counties have voted in favor of issuing bonds in aid of a railroad recently surveyed through this portion of the State.

Gadsden, Ala.—The Commercial and Industrial Association of Gadsden is agitating the question of building a line from the city to the Etowah coal fields, an estimated distance of seventeen miles. If constructed, the road will probably be a branch of the Louisville & Nashville system. J. M. Elliott is one of the promoters of the enterprise.

Greenville, S. C.—The Greenville-Piedmont Traction Co. has been organized to build between the towns mentioned, an estimated distance of twelve miles. The company is capitalized at \$100,000, and includes George M. Bunting and J. K. Dawes.

Greenwood, S. C.—A correspondent of the Manufacturers' Record writes that an electric railroad may be built from Greenwood to what is known as Harris Lithia Springs, an estimated distance of fifteen miles. A. Rosenberg of Greenwood is reported as interested in the matter.

Henrietta, Texas.—H. M. Levan, president of the Gulf, Oklahoma & Kansas Shortline Railway Co., writes the Manufacturers' Record that the estimated length of the road is 350 miles. It is expected to complete a portion by January 1, 1902. Mr. Levan may be addressed at Cherryvale, Kans.

Jacksonville, Fla.—The St. John's River Terminal Co. has begun work upon its railroad, which will be about four and one-half miles in length. It will provide terminals for the Atlantic, Valdosta & Western Railroad. Walton Ferguson is president of the company.

Knoxville, Tenn.—The Knoxville & Bristol Railroad project, it is stated, has been revived by the original promoters, and another survey is in progress. H. M. Aiken is president of the company.

Louisville, Ky.—The Louisville, Henderson & St. Louis system is to be relaid, it is understood, with 80-pound rails and rebalanced for a considerable mileage with stone. R. N. Hudson at Cloverport, Ky., is chief engineer.

Marion, Va.—Messrs. Moltz & Beeber, it is reported, represent capitalists of Williamsport, Pa., in a purchase of timber land in the vicinity of Marion. It is stated that they will construct a railroad to connect the property with some system now in operation, but may purchase the Marion & Rye Valley Railroad.

Nashville, Tenn.—An election will probably be ordered in the near future to decide on the question of voting \$1,000,000 in bonds in aid of the Nashville & Middle Tennessee Railroad, being promoted between Nashville and a connection with the Illinois Central Railroad by E. B. Stahlman and others. Mr. Stahlman is president of the company organized to carry out the project.

New Orleans, La.—A report is current that the Southern Railway Co. has under consideration a branch line which will parallel the coast of the Gulf of Mexico between Scranton, Miss., and New Orleans. W. H. Wells at Washington, D. C., is engineer.

Richmond, Va.—It is announced that contracts have been let for the construction of a considerable mileage of second track on the Chesapeake & Ohio between Richmond and Clifton Forge, Va. George W. Stevens at Richmond is president of the company.

Shelbyville, Ky.—It is reported that Peter A. Lund of Louisville and others have become interested in the Shelbyville & Bloomfield Railroad, which extends between the towns mentioned, a distance of twenty-six miles, and will extend it to Nashville, Tenn. New York parties are reported to have become interested in the plan.

Sycamore, Ga.—The town of Sycamore has decided to take \$10,000 in bonds in the interest of the Brunswick & Birmingham Railroad, now under construction between the cities mentioned.

Vicksburg, Miss.—P. M. Harding of Vicksburg, president of the Vicksburg & Northeastern Railroad Co., writes the Manufacturers' Record that the road will be built from Vicksburg to Hattiesburg, Miss., and not from Jackson, as has been reported. Engineer Whitney of New York has been appointed chief engineer, and it is expected to begin surveys in the near future. The estimated length of the road is 140 miles.

Walhalla, S. C.—A report is current that the Blue Ridge Railroad, recently sold to Fairfax Harrison and B. L. Abney of Washington, D. C., will be extended from Walhalla to a point in Eastern Tennessee, and that the extension will be built in the interest of the Southern system. The road is now in operation between Anderson and Walhalla, a distance of thirty-four miles.

Washington, D. C.—It is announced that twelve miles of right of way have been secured in the interest of the Washington & Baltimore Electric Railroad, which is to be built by a company of which James Christy of Cleveland, Ohio, is general manager. A branch of the road is to be built to Annapolis.

Webb City, Miss.—The Sunflower & Eastern Railway Co. has been incorporated in Mississippi by Logan M. Roots of Little Rock, Ark., and others to build between

Webb and Parchman, Miss., a distance of twelve miles.

Westminster, Md.—The promoters of the electric railroad between Reisterstown, Md., and Gettysburg, Pa., have organized the Baltimore, Westminster & Gettysburg Railway Co. to carry out the project, and have elected I. A. Sweigard of Philadelphia, president; Charles E. Fink of Westminster, vice-president, and Thomas F. Durham of Philadelphia, secretary and treasurer. It is announced that all of the capital stock has been subscribed. Charles W. Atmore at Philadelphia is chief engineer.

West Plains, Mo.—A plan is under way to construct an electric railroad twenty-five miles long from West Plains to Bakersfield and other towns in Northern Arkansas. The estimated length of the road is twenty-five miles.

Wheeling, W. Va.—The Panhandle Traction Co., already referred to in this column, it is reported, has asked for bids for constructing its proposed electric railway between Wheeling and Wellsburg, and has ordered rails. The estimated cost of the road is \$350,000. Howard Hazlett of Wheeling is president of the company.

Wilmington, N. C.—A report is current that the Wilmington & Seacoast Railroad, in operation between Wilmington and Wrightsville, a distance of twelve miles, will be combined with the Wilmington street railway system and changed to a trolley line. Hugh McRae of Wilmington is reported as interested in the plan.

Winnfield, La.—The Louisiana & Arkansas Railroad Co. has completed surveys for its proposed extension to Winnfield, and it is understood the line will be completed during the present year. The road is now in operation between Stamps, Ark., and Ashland. William Buchanan at Texarkana, Texas, is president of the company.

Street Railways.

Baltimore, Md.—The United Railways & Electric Co. of Baltimore is securing right of way for its proposed extension from Dundalk to Sparrow's Point. The estimated length of the extension is three miles. Geo. R. Webb at Baltimore is president.

Birmingham, Ala.—It is announced that the improvements to be made to the Birmingham Street Railway system at a cost of \$1,000,000 are to be made immediately. They include the relaying of considerable track and the construction of extensions. Robert Jemison may be addressed.

El Paso, Texas.—It is reported Messrs. Stone & Webster of Boston, Mass., have become interested in the street railroad being promoted by S. Goodrich and others. The city council has given Mr. Goodrich and his associates a franchise to build the system, which will be operated by electric power.

Houston, Texas.—The improvements to be made to the Houston Street Railway include the relaying of about six miles of track with 90-pound steel rails, also several extensions in the suburbs. The company has purchased additional rolling stock. H. D. Rice is receiver.

Mobile, Ala.—J. Howard Wilson has been elected president of the Consolidated Company, representing the lighting and street-railroad interests of Mobile. It is reported that the street railway will be relaid with heavier rails and additional rolling stock purchased in the near future.

Richmond, Va.—Fritz Sittlerding has been elected president of the Northside Land Co., which is interested in an electric railroad to be built to Chelsea Hill from Chestnut Hill. It is understood the work is to be done immediately.

Wheeling, W. Va.—The city council is considering the granting of a franchise to a company which includes F. J. Park and Alfred Paul to construct a trolley line from the northern and southern suburbs of the city. Another company in which Joseph C. Brady is interested has applied for a franchise to build along several streets, while Howard Hazlett, president of the Panhandle Traction Co., is the third petitioner for a franchise to build in the city and suburbs.

Go to the P. & B.—These initials are very familiar to the friends of the Standard Paint Co. of 100 William street, New York, which extends a general invitation to visit its headquarters at the P. & B. building at the Pan-American Exposition. It is very conveniently located, and is one of the unique features of the exposition, for the reason that it is constructed entirely of the Ruberoid roofing made by the company referred to. It is well lighted, artistically ornamented, and contains samples of the famous P. & B. goods, such as roofing and flooring, insulating, building and lining papers, preservative paints and electrical compounds.

Machinery, Proposals and Supplies Wanted.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The MANUFACTURERS' RECORD has received during the week the following particulars as to machinery that is wanted.

Boiler and Engine.—See "Shuttle Mill."

Boiler and Engine.—H. E. Cortland, New Euclid Hotel, Athens, Tenn., is in the market for a 40 to 60-horse-power engine and portable boiler.

Boiler Plant.—J. K. Taylor, supervising architect, Washington, D. C., will open bids August 22 for furnishing and installing boiler plant for United States Marine Hospital at Cleveland, Ohio, in accordance with plans, etc., copies of which are furnished by architect or at office of "Custodian" of building at Cleveland.

Boilers.—See "Tinplate Plant."

Brass Foundry.—Geo. S. Parkes & Co., 7 Noel Block, Nashville, Tenn., want to correspond with parties who can build and equip a brass foundry.

Broom Machinery.—C. F. Flowers, Talladega, Ala., wants prices on broom machinery.

Building Material.—B. Bates, Silverton, S. C., wants bids on building materials, including 110,000 bricks.

Bulkhead.—City Register, care of Board of Awards, Baltimore, Md., will receive proposals until August 7 for construction of a stone and timber bulkhead at Cable street. Bids must be accompanied by certified check for \$300. Usual rights reserved. For specifications apply harbor board office.

Cocoon-shucking Apparatus.—Jas. W. Callaway, care of Virginia-Carolina Chemical Co., Macon, Ga., wants apparatus for shucking cocoanuts.

Delinting Machinery, etc.—J. R. Westerfield, New Orleans, La., 233 North Peters street, wants to correspond with manufacturers of machinery for delinting cottonseed hulls, also grinding and pulverizing machinery, dryers and evaporators.

Electrical Machinery.—Dibert, Stark & Brown Cypress Co., Donner, La., is in market for second-hand dynamo of 300 to 500 lights.

Electrical Machinery.—See "Hoisting Equipment."

Electrical Motor.—See "Mining Equipment."

Electric Fans.—See "Fans."

Electric-light Plant.—See "Tinplate Plant."

Elevator.—T. J. Darling, Waycross, Ga., wants bids on electric elevator.

Elevator.—F. R. Penn Tobacco Co., Reidsville, N. C., is in the market for a steam-power elevator of 2000 to 3000 pounds capacity.

Engine.—Milledgeville (Ga.) Electric Light Co. wants a 150-horse-power engine.

Engine.—W. A. Martin & Co., East Bend, N. C., will need engine, steam, gas or gasoline, sewing machines, pulleys and shafting.

Engines.—Stanyon-Miller Engineering Co., No. 701 Empire Building, Pittsburgh, Pa., will consider estimates on 800 to 2000 horse-power engines that have been in use for short time.

Engine Specialties.—Petersburg (Va.) Iron Works Co. wants one five-inch balance throttle valve and two engine indicators complete, all second-hand.

Fans.—Wm. F. Riley, Tripoli, Barbary, wants addresses of makers of electric and clockwork fans for household use.

Flouring Machinery.—S. C. George, Denver, S. C., wants to buy bran duster, reel and centrifugal reel.

Flour Mill.—S. B. Fowler, Gainesboro, Tenn., will want machinery for a 50 or 75-barrel flour mill and grist mill.

Foundries.—Geo. W. Chamlee, 7 McConnell Block, Chattanooga, Tenn., invites bids from manufacturers using malleable iron on the production of patent hamestrings.

Foundry Equipment.—Frictionless Metal Co., Richmond, Va., is in market for a reverbatory furnace.

Furnace.—See "Foundry Equipment."

Furniture.—C. R. Smith, Jacksonville, Fla.,

wants to buy fifty suits of bedroom furniture.

Grist Mill.—See "Flour Mill."

Heating Plants.—T. J. Darling, Waycross, Ga., wants bids on hot-water system of heating.

Hoisting Equipment.—T. H. Sampson, 4800 South Front street, New Orleans, La., is in the market for two 5½x10-inch double-drum hoisting engines, two sets boom derrick irons complete, four-inch suction tank pump and 100-light alternator with transformers.

Ice Plant.—Southern Coal Co., 80 St. Francis street, Mobile, Ala., is in market for ice plant complete.

Ice Plant.—R. H. Whatley, Talladega, Ala., wants to correspond with makers of refrigerating and cold-storage plants.

Ice Plant.—Somerset (Ky.) Ice Co. wants bids on a 50-ton ice plant.

Ice Plant.—J. Wilfred Gaidry, Westwego, La., wants prices and full information on 10-ton ice plant and refrigerating plant for same tonnage.

Machine Tool.—Sprout, Waldron & Co., Muncy, Pa., are in the market for a 32-inch 10-foot engine lathe, with compound rest; want prices both with and without taper attachments.

Machine Tools.—Thos. Pattison Sons, Albany, Ga., are in the market for 24 to 30-inch drill press.

Mining Equipment.—Peacock's Iron Works, Selma, Ala., is in market for hoisting machine of 12, 15 or 20 horse-power, electric motor of same capacity, mile of 20 or 25-pound rails, narrow or standard gauge Shay locomotive for wooden rail, and 12-ton engine, new or second-hand.

Mining Machinery.—E. L. Cranfill, Box 534, Augusta, Ga., wants complete mining outfit, including crushing, stamping and milling machinery.

Motor.—J. Elwood Cox, High Point, N. C., is in the market for a 30-horse-power electric motor, new or second-hand.

Paper Cutter.—W. A. Martin & Co., East Bend, N. C., will need paper cutter.

Piano-hammer Machinery.—Presley Piano Hammer Co., Springville, Ala., wants to let contract for manufacture of T socket or show for piano hammers in celluloid, brass or aluminum; also wants machinery for making piano hammers with a rounded stem, instead of square, as usually made, and machinery for making brass or aluminum sockets or elbows to fit said hammer stem and hammer shank.

Pulverizing Machinery.—See "Delinting Machinery, etc."

Pumping Plant.—W. A. Blount, Washington, N. C., wants information and prices on equipment to raise water that is fifteen feet below surface and carry it through one-and-one-half-inch pipes, to supply 1000 gallons daily.

Pulleys and Shafting.—See "Engine."

Pump.—See "Hoisting Equipment."

Quarrying Equipment.—Cedar Creek Manganease Co., H. P. Fahney of Frederick, Md., treasurer, will want to purchase machinery for quarrying.

Quarrying Machinery.—W. B. Elkout, Aberdeen, N. C., wants estimates on marble-sawing machinery of 600 to 1200 lineal feet capacity daily.

Railway Equipment.—See "Mining Equipment."

Railway Equipment.—Lott & Perkins Lumber Co., Inda, Miss., wants some log-car trucks, about 30,000 or 40,000 capacity, either new or second-hand.

Road Improvements.—"Commissioners' Court of Harris County," Houston, Texas, will open bids August 22 for furnishing material and constructing twenty-five miles of paved roads, including necessary grading, ditching, etc. Plans and specifications on file in office of county surveyor, Wm. Bradburn. The latter will furnish all necessary information to inquirers.

Saw-mill.—W. D. Harrington, Jesup, N. C., wants to buy saw-mill, shuttle mill, engine and boiler.

Sewer Work.—J. H. Fout, mayor, Elkins, W. Va., will open bids August 3 for sewer work approximating 1300 feet 20-inch, 300 feet 16-inch, 1000 feet 12-inch and 500 feet 10-inch. Plans and specifications at offices of mayor and engineer.

Sewing Machines.—See "Engine."

Timplate Plant.—Jackson Iron & Timplate Co. of Clarksburg, W. Va., is ready to receive catalogues and price-lists on electric cranes, light plant, two 80-horse-power boilers, 350-horse-power boiler and general mill machinery. This item was published last week, but letters should be addressed to C.

C. Moore, general manager, 39 Vine street, Columbus, Ohio.

Water Supply.—See "Pumping Plant."

Water-works.—Town of Scotland Neck, N. C., wants information and prices on machinery for drilling deep wells; J. E. Shields, mayor.

Well-drilling.—See "Water-works."

Well-drilling.—Twentieth Century Prospecting & Mining Co., L. W. Gregg, secretary, Bank of Fayette Building, Fayetteville, Ark., will want to contract for well-drilling soon.

Well-drilling Machinery.—Lewis E. Bratt, Lester, Ark., wants to communicate with manufacturers of well-drilling machinery.

Woodworking Machinery.—See "Saw-mill."

Woodworking Machinery.—Wanted—Eight to 12-inch buzz planer, single-head shaper for belt or friction (latter preferred), or will buy double-spindle if price justifies; 30 or 32-inch band saw and iron rip-saw table, with mandrel complete. Address Lock Box 184, Rocky Mount, N. C.

TRADE NOTES.

Ball Engines.—Recent orders secured by the Ball Engine Co. of Erie, Pa., are from the Iowa Gold Mining & Milling Co. of Silvertown, Col., and for the Washington county courthouse of Washington, Pa.

Opportunity to Manufacturers.—In another column will be found a reference to a saw and planing mill, also a stock of merchandise offered for sale in Texas. Parties interested may address Box 476, Jefferson, Texas.

Chance to Buy a Saw-Mill.—L. H. Johnson of Brownsville, Tenn., will give information relative to a saw-mill plant for sale and ready for operation. An abundance of timber is accessible. It is advertised in another column.

New Mill for Sale.—A plant containing thirty-one knitting machines for hose and half-hose in connection with a complete dye plant is offered for sale by W. G. Smith of Orangeburg, S. C. Further particulars will be found in another column.

Useful Mementos.—Match boxes and brushes are always useful at one time or another. The Henry Stevens Sons' Co. of Macon, Ga., has borne this in mind, and is sending its friends a very ornamental match box and a substantial brush, with their compliments.

Very Busy.—The Eureka Supply Co. of Chattanooga, Tenn., is very busy at present filling contracts recently secured. They include iron work for the city hall at Ensley, Ala., and courthouse for Starkville, Miss., and shipments of wire work to various parts of the South. A recent order came from Cuba.

The Government as a Customer.—The United States government is one of the customers of the S. Obermayer Company of Cincinnati, and recently placed an order with the company for three Whiting cupolas having a capacity for 100 tons of iron daily. The cupolas will be placed in the Brooklyn navy-yard.

The G. I. Outing.—The officers and employees of the General Incandescent Arc Light Co. of New York enjoyed a day's outing at Whitestone Landing, L. I., on July 27. Baseball and other sports were indulged in, and the day closed with a dinner seasoned by remarks from the bright people about the tables. The outing was held under the auspices of the G. I. Club.

One of the Largest.—The extent of the orders recently received by the Sterling Blower & Pipe Manufacturing Co. of Hartford, Conn., for its dust-collecting and feeding apparatus is very noticeable. One order just received is for the shops of the New York, Ontario & Western Railroad Co. at Middletown, N. Y., where equipment for handling sawdust and shavings, etc., will be installed.

Death of Charles Calvin Briggs.—Mr. Chas. Calvin Briggs, a member of the board of managers of Messrs. Jones & Laughlins of Pittsburg, recently died in that city, after a lingering illness. Mr. Briggs was well known to the steel industry for his prominence in connection with the firm mentioned. He had risen to the position he occupied at the time of his death through his own efforts, and had a high reputation as a business man.

Holds Fast.—The characteristics of the Emmert vises are that they have a sure

grip. The Emmert Manufacturing Co. makes a specialty of tools for woodwork, and holds it in any position required by the operator—not in one or two positions merely. The Universal vise has six pairs of jaws, so that it is practically adapted to any kind of work. The company will be pleased to give additional information if it is addressed at Waynesboro, Pa.

An Up-to-Date Engine.—The Brownell & Company of Dayton, Ohio, have in the last few months placed on the market their new Twentieth Century Automatic Engine. The design, quality of work and low prices have brought such an increase of orders that this company are now preparing to put on a night shift, and expect in a short time to be in position to make prompt deliveries. The boiler department, while it is flooded with orders, has sufficient capacity to turn out work with a reasonable degree of promptness.

Over a Wide Area.—Orders from the Philippines, Spain, Mexico, British Columbia, as well as various parts of the United States, have recently been included in the mail received by the American Diamond Rock Drill Co., 120 Liberty street, New York. The drilling apparatus constructed by this company seems to have found much favor in the arctic regions as well as the tropics, and the orders include drills of all capacities from 400 to 3000 feet. An especial point is made in instructing miners in the use of the drill by experts sent out with the tools.

The Mueller Picnics.—One of the reasons for the success of the H. Mueller Manufacturing Co. of Decatur, Ill., is its harmonious relations with its employees. The company enters heartily into anything which will tend to benefit those on its pay-roll, and recently arranged what was called a "consolation" picnic at a pleasure-ground near Paris. Over 500 people participated and enjoyed the athletic and other sports offered. Directors of the company were on nearly all of the important committees, and did everything possible to contribute to the pleasure of the occasion.

Noiseless Pinions for the Mint.—The New Process Rawhide Co., Syracuse, N. Y., has received a contract from the United States Mint at Philadelphia for six New Process Noiseless Pinions, sixteen inches diameter, six-inch face. These pinions are a part of the equipment of the new mint building, the machinery for which is just being installed. Six armature pinions for the same motors were shipped by the company a short time ago. They are twelve and two-thirds inches diameter, four-inch face, and will run at a speed of 525 revolutions per minute. The company has just made a shipment of twenty-four pinions to the Sao Paulo Light & Traction Co., Sao Paulo, Brazil.

Many Southern Orders.—James Bonar & Co., Carnegie Building, Pittsburg, Pa., report an increase of business in feed-water heaters for the Southern States. They have on hand the following heaters for the South: Memphis Electric Light & Power Co., two 1500-horse-power tubular type; Parkersburg Iron & Steel Co., one 200-horse-power open type and one 250-horse-power open type; Morrilton Cotton Oil Co., one 200-horse-power open type; A. D. Adair & McCarty Bros., one 150-horse-power open type; Furman Farm Improvement Co., one 150-horse-power open type. They have also just shipped one 500-horse-power heater to the Golden Foundry & Machine Co., Columbus, Ga., and two 600-horse-power heaters to the Sloss-Sheffield Iron & Steel Co., Birmingham, Ala., this being the third order, making six heaters in all shipped this company this year. They also have a large number of orders on hand for the Northern States.

Mammoth Chains.—A contract of unusual interest has been secured by the Newhall Chain, Forge & Iron Co., 26 Cortlandt street, New York. This company has secured the contract to make the anchor chains for the steamships under construction for the Great Northern Steamship Co. at New London, Conn. The chains consist of 660 fathoms of three and three-sixteenths inches diameter and 300 fathoms of one and seven-eighths inches diameter. The larger chain will be constructed in "shots" of fifteen and thirty fathoms each. Each link of this size will measure nineteen and one-half inches in length and eleven and one-half inches in width, and will weigh 100 pounds to the foot. It is said to be the largest ever manufactured in this country, and probably in the world, and will be turned out at the Lebanon Chain Works. The order was received in competition with several domestic and foreign manufacturers, and the Newhall Company is to be congratulated upon its success.

TRADE LITERATURE.

Photographs Do Not Lie.—This is the old saying, but they can be touched up to give a very flattering appearance. In the catalogue recently issued by the Vilter Manufacturing Co. of Milwaukee, Wis., describing its Corliss engines, the photographs reproduced are original in every respect, consequently one gets an idea of the general excellence of the Vilter mechanism. The views include engines mounted on cast-iron base plates, heavy-duty engines, and engines direct-connected to refrigerating machines. A very interesting illustration is a series of three 200-ton ice machine built by the Vilter Company for the Cudahy Packing Co. of Kansas City.

An Up-to-Date Industry.—Merely the illustration of the plant of the Buffalo Forge Co. at Buffalo, N. Y., gives an idea of the extent of this industry, which it might be said has an international reputation for its work. The engines which form one of its specialties can be considered up to date in every respect. A special feature is their compactness and the small area required for installation, as well as their durability and general efficiency. The company manufactures a variety of low-pressure engines, under classes A and B, for ventilating purposes; also special grades for running dynamos, etc. A complete description of the mechanism will be found in the latest catalogue issued by the company.

No Dull Season.—The summer months, usually a dull season with manufacturers, find Charles H. Besly & Co., 10-12 Canal street, Chicago, with many orders to fill immediately. Their factory at Beloit, Wis., is working overtime, in spite of the addition of considerable equipment caused by the work which requires finishing immediately. The sales of Gardner Grinders and Besly band machines are remarkably large. The firm is ready to place its new spiral paper circles on Gardner Grinders, and to produce abrasive circles suitable for metals as well as for gutta percha and wood. Samples of the circles will be sent to users of the machine gratis. An illustrated catalogue is now ready for distribution.

As Might Be Expected.—When a manufacturer has to number his trade publications up in the hundreds it is an excellent indication of the extent of his plant. This holds true with the B. F. Sturtevant Co. of Boston, whose latest catalogue, descriptive of the Sturtevant engines, is numbered 103. As might be expected, it is of a high standard in typography, illustrations and general appearance. The apparatus described includes the automatic cut-off, throttling, single upright and other noted types of engines manufactured by this company. Incidentally it may be stated that the Sturtevant Company has published a "little list" of plants and vessels in which its fans for induced and other draught are installed. About every part of the world is represented in the list, as well as some of the principal United States warships and many of the transatlantic liners.

A Work of Art.—It is hardly necessary to refer to the rapid substitution of steel for other material in the manufacture of freight cars. Tests have been made which have thoroughly demonstrated its success. A recent catalogue issued by the Pressed Steel Car Co. of Pittsburg not only shows what a variety of forms are being made, but illustrates by photographs which give an idea of the strength of this form of construction. Experts estimate that a steel car can be made which will last as long as a steel bridge; in other words, so long as to really outlive its usefulness. A modern estimate of the life of a steel car is forty years, while that of a wooden one is fifteen years. These calculations are based upon the supposition that the rolling stock does not meet with an accident. In that case, the photographs referred to indicate the substantial construction of steel as compared with wood. One of the photographs depicting a wreck in which an entire coal train is thrown from the track, shows the cars practically uninjured and none of them turned over, although thrown from the trucks. Another wreck in which the train was partly made up of steel cars with wooden ones at the rear end was in a head-end collision on the Union Pacific Railroad. Ten steel cars were uninjured, and none left the track. A number of the wooden cars were piled into a heap and more or less broken up. Steel cars are now being used for about all kinds of freight, and can be seen in operation on most of the large railway systems of the country.

FINANCIAL NEWS.

The Manufacturers' Record invites information about Southern financial matters, items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

For Southern Insurance.

Mr. L. B. Nelson, president of the United States Endowment & Trust Co. of Anniston, Ala., in a letter to the Manufacturers' Record referring to this company and to the need of life insurance and kindred financial institutions in the South, says:

"Millions of dollars go out of the South annually in the shape of life insurance premiums and other investments for accumulation at interest in the cheapest money markets of the world. To send money from sections where current rates of interest range from 6 to 8 per cent. per annum into sections where it is a drag at one-half these rates entails a loss to the people of the South quite beyond the comprehension of those who have never given the subject serious thought. Such practice is supreme folly, and is as silly as sending iron from Birmingham to Pittsburgh to be rolled into rails for a Birmingham street railway, or cotton from Georgia to England for manufacture into cloth, to be returned and worn by our people. This ridiculous custom relative to iron, cotton and many other things has been largely changed, thanks to the work of such periodicals as the Manufacturers' Record, and we think it quite as foolish to use the money of the South as it is now used. Why should not these millions thus drawn from this section be employed in establishing insurance companies and other useful financial institutions in our own section, and thus develop the resources of the South and materially enhance her values?"

Among those interested in the organization of this company, in addition to Mr. Nelson, the president, are Capt. D. G. Purse, president of the Savannah Board of Trade; Mr. John B. Knox, president of the Alabama Constitutional Convention, now in session, and other men of high business standing in the South.

New Corporations.

J. J. Johnson and others have organized the Citizens' Bank at Geneva, Ala., with \$50,000 capital stock.

Local business men are interested in the formation of a bank at Homerville, Ga., with \$25,000 capital stock.

G. W. Cone and others are interested in the Bank of Brunson, S. C., recently organized with \$25,000 capital stock.

Arrangements are being made to organize another national bank at Orange, Texas, by C. S. Reed of Fort Worth and others.

J. W. Minor and J. J. Walker are interested in the Steel City Bank, recently organized at Ensley, Ala., with \$50,000 capital stock.

W. D. Morgan has been elected president, and Marks Moses, vice-president, of the Eureka Building and Loan Association, recently organized at Georgetown, S. C.

The Commercial National Bank, recently organized at Sherman, Texas, with \$100,000 capital, has begun business with W. R. Brents, president; J. D. Carter, vice-president, and F. Z. Edwards, cashier.

The Georgia Co-operative Fire Association has been organized by L. L. Arrington, W. M. Allen and others of Augusta for the purpose of doing a fire insurance business. The principal offices will be at Augusta.

The First National Bank, recently organized at Waverly, Tenn., will begin business about October 1 with \$25,000 capital stock. John F. Shannon has been elected president; Edward Cowen, vice-president, and John E. Pullen, cashier.

New Securities.

The American Central Insurance Co. of St. Louis has decided to increase its capital stock from \$600,000 to \$1,000,000.

Thomas J. Watts, mayor, will receive bids until September 2 for an issue of \$10,000 in 5 per cent. bonds of the town of Chipley, Fla.

The city of Florence, Ala., it is stated, will soon receive bids for an issue of \$20,000 in 5 per cent. sewer bonds. The mayor may be addressed.

The town of Kaufman, Texas, has decided by vote in favor of issuing \$20,000 in 4 per cent. bonds for water-works purposes. Address the mayor.

The issue of \$17,000 in 5 per cent. bonds of Dublin, Texas, has not been sold, and it is understood is again on the market. The mayor may be addressed.

H. E. Jones, chairman of the finance committee, will receive proposals until August 12 for \$10,000 worth of 5 per cent. improvement bonds of the city of Bristol, Va.

The finance committee of the city council of Nashville, Tenn., has decided to issue \$100,000 in bonds, which it is understood will be placed on the market in the near future. The mayor may be addressed.

The Central of Georgia Railway Co. has issued \$2,500,000 in bonds, of which \$1,840,000 are upon its Chattanooga division, \$462,000 upon its Oconee division and \$200,000 in consolidated bonds. The securities bear 5 per cent. interest.

The Wilmington Sewerage Co. of Wilmington, N. C., it is reported, has given a mortgage to the West End Trust & Safe Deposit Co. of Philadelphia to secure an issue of \$150,000 in 5 per cent. bonds. William E. Worth is president of the company.

Financial Notes.

Reports of the banks of discount at Atlanta, Ga., for the six months ending June 30 show an increase of deposits over the same period last year of \$2,500,000, the total amounting to \$8,700,000. Loans and discounts show an increase of \$1,700,000, aggregating \$6,448,000. The increases indicate the growth of business generally at Atlanta.

A little pamphlet telling the story of the success of the Third National Bank of Columbus, Ga., has recently been issued, which contains some interesting information relative to the remarkable prosperity of this institution. Mr. G. Gunby Gordon is president, and C. E. Beach, cashier. The booklet is printed in very appropriate colors—red, white and blue.

The Greensboro Loan & Trust Co. of Greensboro, N. C., has recently issued a circular announcing its facilities for doing a general banking business, making loans on real estate and acting as receiver, trustee, guardian, etc. J. W. Fry is president; J. S. Cox, vice-president, and W. E. Allen, treasurer, of the company. The directory comprises a number of prominent merchants and manufacturers of North Carolina.

SOUTHERN COTTON-MILL STOCKS.

Quotations Furnished by Hugh MacRae & Co., Wilmington, N. C., for Week Ending July 30.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.)	91	91
Alben Mfg. Co. (S. C.)	90	90 3/4
American Spinning Co. (S. C.)	103	103 1/2
Anderson Cotton Mills (S. C.)	129	129
Arkwright Mills (S. C.)	117	117
Augusta Factory (Ga.)	80 1/2	80 1/2
Avondale Mills (Ala.)	82 1/2	82 1/2

Belton Mills (S. C.)	101 1/2
Bennettsville Mfg. Co. (S. C.)	100
Cabarrus Cotton Mills (N. C.)	145
Clifton Mfg. Co. (S. C.)	175
Clinton Cotton Mills (S. C.)	121
Courtenay Mfg. Co. (S. C.)	117
Dallas Mfg. Co. (Ala.)	90
Darlington Mfg. Co. (S. C.)	95
Eagle & Phenix Mills (Ga.)	100
Enoree Mfg. Co. (S. C.)	113
Enterprise Mfg. Co. (Ga.)	100
F. W. Toe Mfg. Co. (S. C.)	115
Gaffney Mfg. Co. (S. C.)	113
Granby Cotton Mills (S. C.)	100
Granby Cotton Mills (S. C.) 1st Pfd.	101
Graniteville Mfg. Co. (S. C.)	100
Greenwood Cotton Mills (S. C.)	96 1/2
Grendel Mills (S. C.)	100
Henderson Cotton Mills (N. C.)	120
Henrietta Mills (N. C.)	201
John P. King Mfg. Co. (Ga.)	100
Langley Mfg. Co. (S. C.)	102
Laurens Cotton Mills (S. C.)	135
Lockhart Mills (S. C.)	102 1/2
Loray Mills (N. C.)	90
Louise Mills (N. C.)	101 1/2
Lynchburg Cotton Mills (Va.)	125
Lynchburg Cotton Mills (Va.) Pfd.	145
Manchester Cotton Mills (S. C.)	115
Mayo Mills (N. C.)	150
McColl Mfg. Co. (S. C.)	98
Newberry Cotton Mills (S. C.)	113 1/2
Odell Mfg. Co. (N. C.)	85
Orr Cotton Mills (S. C.)	100
Pacolet Mfg. Co. (S. C.)	200
Pelzer Mfg. Co. (S. C.)	172
Piedmont Mfg. Co. (S. C.)	175
Raleigh Cotton Mills (N. C.)	116
Richland Cotton Mills (S. C.)	104
Richland Cotton Mills (S. C.) Pfd.	104
Ronoke Mills (N. C.)	82
Sibney Mfg. Co. (Ga.)	78
Southern Cotton Mills (N. C.)	97
Spartan Mills (S. C.)	123
Trion Mfg. Co. (Ga.)	125
Tucapau Mills (S. C.)	125
Union Cotton Mills (S. C.)	148
Union Cotton Mills (S. C.) Pfd.	100 1/2
Victor Mfg. Co. (S. C.)	106
Warren Mfg. Co. (S. C.)	90
Warren Mfg. Co. (S. C.) Pfd.	101 1/2
Washington Mills (Va.)	100
Whitney Mfg. Co. (S. C.)	129
Wilmington Cot. Mills (N. C.) Pfd.	100
Wiscasset Mills (N. C.)	115

TRADE LITERATURE.

Compliments by the Hundred.—While the latest catalogue issued by the Stilwell-Breece & Smith-Vaile Co. at Dayton, Ohio, treats of the special machinery for heating and purifying water for steam boilers, which it manufactures, perhaps the most interesting feature of the work is the hundreds of testimonials from some of the most prominent manufacturers in the United States relative to the efficiency of its apparatus. The majority of the testimonials are right to the point, and the reader cannot but believe them. Incidentally the catalogue gives some valuable information about the incrustation of steel boilers and how to prevent it, and illustrations of some of the latest improvements made to the Stilwell heaters, filters and other devices. A circular descriptive of the Stilwell cast-iron heaters has also been published describing its merits.

Everything on Wheels.—The Kilbourne & Jacobs Manufacturing Co. of Columbus, Ohio, appears to manufacture nearly everything that runs on wheels, judging from the recent catalogues issued. No. 7 illustrates trucks of various kinds, baggage and express wagons, lumber skids and pushcarts; No. 31 illustrates the various kinds of cars for mine, mill and general factory use, as well as railroad construction work, which it manufactures, while No. 33 is devoted to steel road scrapers, contractors' plows, dump cars, wheelbarrows of various kinds, steel sinks, etc. It is impossible to give more than an outline of the specialties illustrated and described. Anyone needing vehicles of the sort referred to should write for the catalogue, and he will be pretty certain to find just about what he wants. It is hardly necessary to say that the company serves a very wide area of territory, and that its work is noted for modern improvements and durability.

Protecting Metal Work.—The necessity for protecting metal work of different kinds is recognized by contractors generally, especially in this period of steel architectural construction. A recent circular issued by the Protectus Co., North American Building, Philadelphia, refers to the subject as follows: "Roof trusses over terminals subject to the sulphurous fumes of locomotive gases, and plate girders crossing other roads, and especially near stations where locomotives stop directly beneath, have been found to be unsafe and useless in less than ten years. The steel frame of the sky-scraper, being called upon to withstand the corrosive action of the air, not for years, but for decades, and being placed within walls where it cannot be inspected, requires the fullest protection. To do this properly a paint of the highest grade only must be employed, and it must offer an impervious coating to the moisture containing the chemical constituents so detrimental to iron and steel. The Protectus Co. has discovered, and is now offering to the public at a reasonable cost, Protectus, an absolute preservative for metal against

TABLE OF CONTENTS.

EDITORIAL:	Page.
Pig-Iron Production for Six Months	19
Backing Up the Railroad	19
Charleston's Good Fortune	19
Southern Textile Labor	19
A Knockout Criticism	20
Mills in Cotton Fields	20
Education for the People	20
Something Wrong Here	20
Employers and Employees	20
Politics and Development	21
Enlarging Its Scope	21
Louisiana Rock Salt	22
Salt in Texas	22
Petroleum in Alabama	22
Oil on the Southern Pacific	22
The Pig-Iron Market	22
West Virginia Minerals	22
Geology of Georgia	22
For Telegraph Poles	22
FOREIGN TRADE:	
Exports from America	23
Wants Cotton Sheetings	23
American Trade With Germany	23
Coal for the Mediterranean	23
American Goods for India	23
For Use in India	23
Trade With Roumania	23
To Add More Vessels	24
Notes	24
Progress at Brunswick	24
RAILROADS:	
Electric Lines in South Carolina	24
Earnings of the Southern	24
Southern Pacific Earnings	24
Valuable Pamphlet	24
Large Outlay for Rolling Stock	24
Vicksburg to Hattiesburg	24
A 350-Mile Project	24
Railroad Notes	24
TEXTILES:	
Textile Notes	24
Cottonseed-Oil Notes	25
PHOSPHATES:	
Phosphate Markets	25
Phosphate and Fertilizer Notes	25
MECHANICAL:	
Fast-Feed Flooring Machine (Illus.)	26
Wright Safety Water Columns (Illus.)	26
Vise Attachment for Whiton Gear-Cutting Machine (Illus.)	26
Felton's Mill Brushes (Illus.)	27
Modern Steam Heating	27
Brick Repress (Illus.)	27
Compelled to Enlarge	27
LUMBER:	
Lumber Market Reviews:	
Baltimore	27
Norfolk	27
Charleston	28
Savannah	28
Memphis	28
Lumber Notes	28
CONSTRUCTION DEPARTMENT:	
New Enterprises	29
Building Notes	31
Railroad Construction	32
Machinery Wanted	32
Trade Notes	33
Trade Literature	33, 34
FINANCIAL NEWS:	
For Southern Insurance	34
New Corporations	34
New Securities	34
Financial Notes	34
Southern Cotton-Mill Stocks	34

rust and corrosion. It is elastic, tenacious, impervious to moisture and unaffected by atmospheric gases, heat or cold. Has covering and lasting qualities much greater than any paint. It preserves wood as fully as metal, and in mechanical application differs in no essential particular from the application of paints in general use."

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The Pennsylvania Railroad Company will run special excursions to Buffalo on account of the Pan-American Exposition from Washington, Baltimore and adjoining territory on July 23, 31, August 6, 15, 21, 27, September 5, 11, 17 and 26. Round-trip tickets, good going only on train leaving Washington 7.50 and Baltimore 8.50 A. M., and on local trains connecting therewith, and good to return on regular trains within seven days, including day of excursion, will be sold at rate of \$10.00 from Baltimore and Washington, and proportionate rates from other points. Tickets will be good for passage in parlor cars going and sleeping cars returning on payment of usual Pullman rates. For specific time and rates consult local ticket agents.

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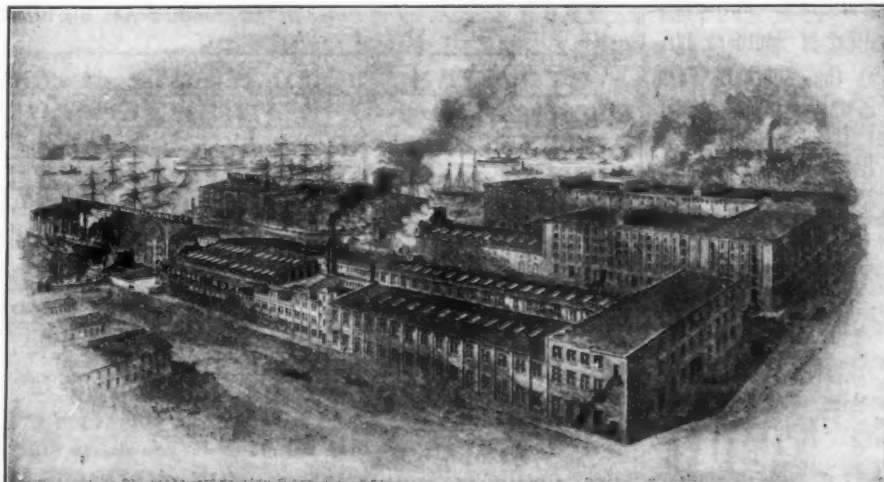
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PROPOSALS.

TREASURY DEPARTMENT, Office Supervising Architect, Washington, D. C., July 20th, 1901.—Sealed proposals will be received at this office until 2 o'clock P. M. on the 25th day of August, 1901, and then opened, for the construction (except heating apparatus, electric wiring and conduits) of the U. S. Custom House and Post Office at Brunswick, Ga., in accordance with the drawings and specification, copies of which may be had at this office or the office of the Postmaster at Brunswick, Ga., at the discretion of the Supervising Architect. **JAMES KNOX TAYLOR, Supervising Architect.**

TREASURY DEPARTMENT, Office of the Supervising Architect, Washington, D. C., July 26th, 1901.—Sealed proposals will be received at this office until 2 o'clock P. M. on the 27th day of August, 1901, and then opened for furnishing and installing new Boiler Plant for the U. S. Marine Hospital at Cleveland, Ohio, in accordance with drawings and specifications, copies of which will be furnished, at the discretion of the Supervising Architect, on application at this office or at the office of the Custodian at Cleveland, O. **JAMES KNOX TAYLOR, Supervising Architect.**

GAFFNEY, S. C., July 26th, 1901.—Sealed bids for the building of the Star Theatre and Office Building will be received at the office of the Treasurer up to 10 o'clock A. M., August 8, 1901. Bidders must enclose certified check for \$500 with their bids. The contractor will be required to give an approved bond in the sum of \$5,000 for the faithful performance of the contract. The plans and specifications can be seen in the office of Hook & Sawyer, Architects, Charlotte, N. C., or at the Merchants & Planters Bank, Gaffney, S. C. Contractor should see the building site and party wall before bidding. The Directors reserve the right to reject any and all bids.

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Sealed proposals, addressed to the Commissioners' Court of Harris County, Texas, at Houston, Texas, will be received up to 12 o'clock noon on Thursday, August 22, A. D. 1901, for furnishing the necessary material and constructing twenty-five (25) miles (approximately) of paved roads, including the necessary grading, embankment and ditching, in accordance with plans and specifications now on file in the office of County Surveyor, Wm. Bradburn. All bids must be accompanied by a certified check upon some local bank for five (5) per cent. of the amount of the bid, to be forfeited as liquidated damages by the successful bidder who fails to enter into contract and bond as required.

Successful bidders will be required to enter into a bond in a sum equal to one-fourth of the contract price, conditioned upon the faithful performance of the contract. The right is reserved to reject any and all bids. Specifications and any information wanted will be furnished to all intending bidders who request same from County Surveyor.

E. H. VASMER,

County Judge Harris County, Texas.

BIDS FOR NEW COURTHOUSE.

Bids for the new Courthouse at Cartersville, Georgia, are wanted on September 17th, 1901, to be handed to L. B. Matthews, Chairman Board of County Commissioners, Barrow County, Georgia. Plans can be seen at the office of L. B. Matthews, Cartersville, Georgia; Kenneth McDonald & J. F. Shebley, Architects, of Louisville, Ky., and J. W. Golucke & Co., Architects, Atlanta, Ga. For further information apply to either of the above named persons. **L. B. MATTHEWS, Chairman.**

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The City of Salisbury has authorized the issue of Coupon Bonds to the amount of ten thousand dollars (\$10,000) of the denomination of one thousand dollars (\$1000) each. These bonds are made payable 15 years after date, bear date July 1st, 1901, and draw interest at the rate of 5 per cent. per annum, the interest payable annually at the National Park Bank of New York City. Sealed proposals for the purchase of these bonds will be received for thirty days from this date. The city reserves the right to reject any and all bids. The bids should be addressed to the undersigned.

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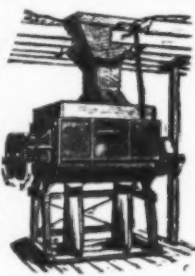
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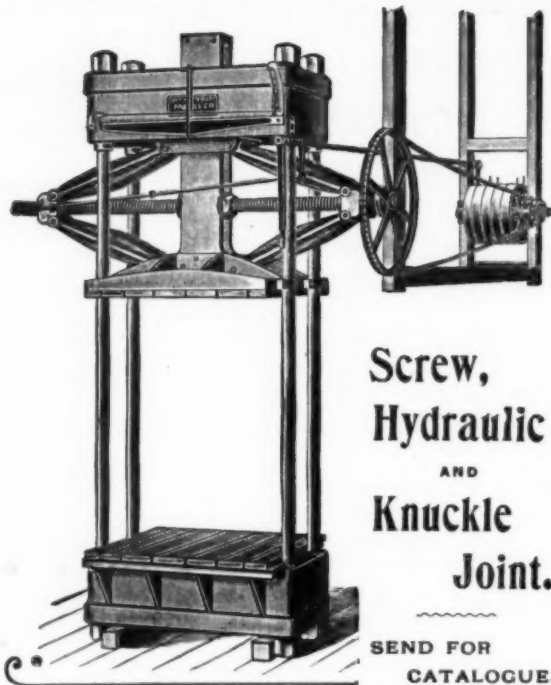
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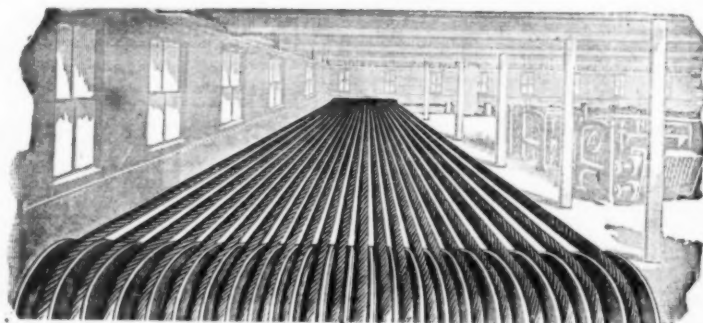


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Affleck, Geo. E.	40	Builders' Iron Foundry	72	Dunning, W. D.	36	Hyde Bros. & Co.	43	Morse Twist Drill & Mch. Co.	12	Situation Wanted	28
Alchison, Robt., Perf. Met. Co.	52	Bunnell, J. H., & Co.	70	Dupont Mfg. Co.	5	Imperial Gas Lamp Co.	5	Morse, Williams & Co.	69	Skinner Chuck Co.	6
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Alabama Iron Works.	6	Burger Iron & Wire Works.	55	Dyson, Joseph, & Sons.	54	nipulator Co.	70	Mueller, H. Mfg. Co.	32	Smith, H. B., Machine Co.	47
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Allington & Curtis Mfg. Co.	72	Byers, John F., Machine Co.	18	Ekhout, W. B.	43	International Corres. Schools.	37	Muzzy Bros.	59	Southeastern Lime & Cement Co.	3
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Alpha Portland Cement Co.	8	Caldwell, H. W., & Son Co.	4	Erikson, Edward E.	41	International Sprinkler Co.	1	Nantz, B., & Co.	12	Southern Cast Iron & Steel Co.	37
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VANDERBILT & HOPKINS,
126 Liberty St., New York City.

HELP WANTED.

Advertisements under this head will be inserted at the rate of one cent a word for each insertion.

AGENTS WANTED.—We want agents to sell on commission to ginners throughout the South our Plantation Cotton Seed Hullers and Separators. A paying contract with control of territory will be given the right party. Address, with reference, PERRYMAN & CO., Birmingham, Ala.

WANTED.—A Superintendent for our Rock Salt Mines at Weeks Island, La. Must be familiar with rock salt business and capable of designing a rock salt mill. Write, giving reference and state experience. MYLES SALT CO., Ltd., New Orleans, La.

SITUATIONS WANTED.

Advertisements under this head will be inserted at the rate of one cent a word for each insertion.

WANTED.—By overseer of weaving, plain or fancy. Experienced designer. Address OVERSEER, care Mf s. Record.

ANALYTICAL CHEMIST AND ASSAYER of wide experience in engineering, chemistry and assaying, is open for position. Address ASSAY, care Mf s. Record.

Have You Anything to Sell to Farmers?

If you have the SOUTHERN FARM MAGAZINE will find new customers for you. The Magazine has in the last four years, as an authoritative periodical of information about agricultural capabilities and conditions in the South, built up an extensive circulation in the North, Western and Northwestern States among farmers who want to move South. As a result of its work there has been a constant and rapid increase in the volume of agricultural immigration to the South. With the recent enlargement of its work it becomes invaluable to all intelligent and progressive farmers of the South as a high class exponent of Southern agriculture. Its circulation is being vigorously pushed in all the fourteen Southern States. It is now, therefore, valuable as a means of reaching farmers not only throughout the North but also and especially in all parts of the South.

It will help you to sell Farm and Garden Implements and Machinery, Breeding Stock (Cattle, Horses, Sheep, Swine, Poultry), Stock Remedies, Farm and Stock Appliances and Specialties of every sort, Dairy Supplies, Seeds and Nursery Stock, Fertilizers, Household Articles and everything needed by the farmer or his family.

An advertisement in the Southern Farm Magazine will open up new channels of trade for you. TRY IT!

SOUTHERN FARM MAGAZINE,

Manufacturers' Record Building.

BALTIMORE, MD.

Towns Wanting Factories.

Would

Power

At a fuel cost of

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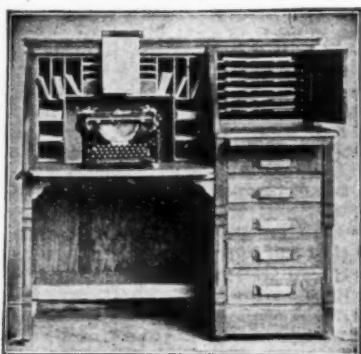
per ten-hour horse-power,
be any attraction to you?

Wheeling, West Va.

can do even better than that. For particulars, ask the

Wheeling Board of Trade,
S. A. THOMPSON, Sec'y.

The Dearborn Cabinet \$24



is conceded to be the best desk ever designed for the Typewriter. Sold on approval, charges prepaid. Return at our expense if not found to be the best desk ever made for the Typewriter.

Affords more comfort to operator. More work can be done in less time. Stationery properly provided for.

No waste of time from hunting stationery.
No waste of stationery from undue hunting.
Adapted to all machines.
Machine protected from dust.
No bolting to desk. Typewriter always level, open or closed. No broken machines from turning bottom side up.

Substantial construction. Made in Golden Oak, also Cherry or Walnut if desired.

Packed for shipment: Weight, 175 pounds; Length, 48 inches; Height, 46 inches; Depth, 31 inches.

Illustrated Catalogue and Prices upon application.

Made by DEARBORN DESK CO., Birmingham, Ala., U. S. A.



Pan-American Route

Between CLEVELAND and BUFFALO.
STEAMERS CITY OF BUFFALO AND CITY OF ERIE.

Both together being without doubt, in all respects, the finest and fastest that are run to the interest of the traveling public in the United States.

TIME CARD-DAILY-APRIL 15th to DEC. 1st.

Leave Cleveland 9 p. m. Arrive Buffalo 6:30 a. m. | Leave Buffalo 9 p. m. Arrive Cleveland 6:30 a. m.

ADDITIONAL SERVICE DURING JULY AND AUGUST
DAILY EXCEPT SUNDAY.

Leave Cleveland 8:00 a. m. | Leave Buffalo 8:00 a. m.
Arrive Buffalo 8:00 p. m. | Arrive Cleveland 8:00 p. m.
Leave Cleveland Tuesdays, Thursdays and Saturdays 9 p. m. Arrive Buffalo 8:30 a. m.
Leave Buffalo Mondays, Wednesdays and Fridays 9 p. m. Arrive Cleveland 8:30 a. m.
All Central Standard Time. Orchestra Accompanies Each Steamer.

Connections made at Buffalo with trains for all Eastern and Canadian points, at Cleveland for Detroit and all points West and Southwest.

Ask ticket agents for tickets via C. & B. Line. Send four cents for illustrated pamphlet.
SPECIAL LOW FARES CLEVELAND TO BUFFALO AND NIAGARA FALLS EVERY SATURDAY NIGHT. ALSO BUFFALO TO CLEVELAND.

W. F. HERMAN, General Passenger Agent, Cleveland, O.

Advertise in the Manufacturers' Record.

Your Opportunity

Investigate now the advantages offered by

"CEDARTOWN, GA."

It may interest you to know of a few of the large industries located here:

3 Cotton Mills,
1 Knitting Mill,
1 Knitting Mill and Spinning Mill (combined),

2 Cotton Gins,
1 Cotton Seed Oil Mill,
2 Foundries,
2 Planing Mills,
2 Iron Ore Washers (Mining Plants),
1 60-ton Furnace,
2 Newspapers,
1 Bank,
2 Hotels,
—Stores, Boarding Houses, Etc.

Would Pay

Stores, Cotton Mills,
Knitting Mills, Machine Shops,
Small Foundries, Stove Works,
Basket Factories, Bucket
Factories, Pipe Works,
Rolling Mills, Sash, Door,
Blind and Bending Works,
Pulp Mills, Paper Mills, Etc., Etc.

The list of industries that could find profitable business here covers the whole field of manufacture.

"CEDARTOWN" is situated in the healthiest section (Piedmont Region) of the South, and is one of its most attractive and prosperous cities.

CEDARTOWN has Underground Sewerage, Electric Light Plant and Water Works, Good Public Schools and Churches of all Denominations.

PARTIES DESIRING TO LOCATE IN THE SOUTH
SHOULD WRITE TO

Cedartown Company, 119 S. Phila., Pa.
4th St.,

Woodworking PLANTS

WANTED

At a number of points in the South along
the line of the

Southern Railway.

There are good openings for Woodworking Plants, such as FURNITURE FACTORIES, PLANING MILLS, SPOKE AND HANDLE FACTORIES, or other plants using pine or hardwoods. Local people will invest from \$6,000 to \$8,000 with an experienced man who will himself invest a like amount or more and do a legitimate business. For information write to

M. V. RICHARDS,

Land & Industrial Agent,

Washington, D. C.

SOUTHERN RAILWAY.

Bargains in Machinery

FOR IMMEDIATE DELIVERY.

HOISTING ENGINES.

- 1 40 H. P. Copeland & Bacon double cylinder, single drum, double geared Hoist. Fine order.
- 1 20 H. P. 7"x10" double cylinder, single drum Flory, without boiler.
- 1 16 H. P. 6 1/2"x8" double cylinder Lidgetwood, without drum. Link motion.

SEND FOR DETAILS.

THOMAS P. CONARD,
119 S. Fourth St. PHILADELPHIA, PA.

FOR SALE. SECOND-HAND WOOD-WORKING MACHINERY.

- 14" Keystone Match.
- 14" Preble Match.
- 24x6 Weatherby, Rug & Richardson; 24x6 Hoyt Bros.; 8" S. A. Wood Fast Feed Match.
- 27x12 Endless Bed Surfer, S. A. Woods.
- 24x6 J. A. Fay Incline Bed Cabinet.
- 12" Inside Woods Moulder.
- 10, 8, 6 and 4" Outside Moulders, all makes.
- Greenlee Self Feed Saw, Saw Tables.
- 38 Rawley & Hermance Re-saw.
- 24 H. B. Smith Re-saw.
- Tenoners, Pony Planers, Mortisers, Jig Saws, Sanders, Gasoline Engines, Fans, Jointers, Lathes.
- Blue prints of all machines will be sent upon application. Write and get our prices before buying.

PRICE MACHINERY CO.
507 Great Northern Bldg. CHICAGO, ILL.

STRUCTURAL IRON WORK

For Immediate Delivery.

- EYE BEAMS, from 3 in. to 20 in.
- CHANNELS, from 1 1/4 in. to 15 in.
- ANGLES, 1 in. to 6 in.
- FLATS & BARS up to 20 in. wide.
- ROOF TRUSSES, GIRDERS, COLUMNS, and BRIDGES designed and built.

Bridge Railings a Specialty.

BELMONT IRON WORKS
PHILADELPHIA, PA.

SECOND HAND Electrical Machinery

BOUGHT AND SOLD.

Correspondence solicited.

THOMPSON, SON & CO.
107 Liberty Street, NEW YORK.

High Speed Engine Bargains

No.	H. P.	Maker	Cylinders
1	300	Buckeye	16 1/2 x 27
1	75	Atlas C.	14 x 20
1	75	Westinghouse	12 x 11
1	65	Beck-Taylor	10 1/2 x 12
1	60	Ball	10 x 13
1	40	A. & S.	8 1/2 x 12
1	30	Atlas C.	9 x 14

CAMP ENGINEERING CO., 47 W. Lake St., Chicago, Ill.

SECOND-HAND.

We have a number of Dynamos and Motors, which we have displaced with larger units. These are all overhauled and guaranteed to be in good working order before shipping. The prices are very moderate indeed.

Your correspondence is solicited.

THE W. C. BENBOW CO.
Manufacturers' Agent, COLUMBUS, OHIO.

FOR SALE.

Second-hand Corliss Engines,

100, 150, 200, 350, 500 and 800 H. P. Boilers, all sizes. Steam Pumps in great variety. Send for bargain list of second-hand machinery.

S. L. HOLT & CO.
67 Sudbury Street, BOSTON, MASS.

FOR QUICK SALE.

A nine-inch four-side Horizontal Moulder, in good running condition. Will be sold at a reduction before removal. Address

L. F. SEYFERT'S SONS,
437-441 N. Third St., PHILADELPHIA, PA.

FOR SALE.

3 80-horse power Return Tubular Boilers in good condition.

W. R. McCABE, West Norfolk, Va.

SECOND-HAND DYNAMOS AND MOTORS EXCLUSIVELY

Largest Stock in the World.

Send for our Monthly Bargain Sheet, with lowest net cash prices on machines in stock—Everything Fully Guaranteed. Capital, \$100,000.00 Paid up.

GREGORY ELECTRIC CO.
54, 56, 58, 60, 62 S. Clinton St., CHICAGO.

Second-Hand Machinery

- 12 & 20" triple-gear pit. Al.
- 96x14 Wilmarth, triple-gear.
- 60x20 Wilmarth, triple-gear.
- 46-64x30, double-head.
- 48x14 Fitchburg, C. R.
- 37x23" triple-gear, P. G.
- 36x18 Betts, double-gear, C. R.
- 30x23 D. W. Pond, C. R. & P. C. F., Al.
- 26x12 Wright, C. R. & chuck.
- 26x10 New Haven.
- 23x8 Putnam, R. & F.
- 20x10 Cincinnati, C. R., Al.
- 20x8 Putnam, R. & F.
- 20x9 D. W. Pond, P. G.
- 19x11 Lodge & Davis, C. R. & taper.
- 17x8 Prentiss, C. R. & P. C. F.
- 17x6 Forsyth, R. & F., P. C. F.
- 14x6 Le Blond, plain turning.
- 14x6 Porter, P. G.
- 38" chucking lathe.
- 2 Also large assortment of fox monitors, speed and turret lathes.

- PLANERS.**
- 72x72x13 Ohi, three heads.
- 61x61x23 Hepworth.
- 48x36x12 New Haven.
- 41x25x16 Whitcomb.
- 24x24x6 Flatner.
- 24x24x8 Pratt & Whitney.
- 18x16x3 1/2 Putnam.

- MISCELLANEOUS.**
- 200-pound Hackney pneumatic power hammer.
- 1400 & 1700-pound Merrill drop hammers, Al.
- 400, 800, 1000 and 2200-pound ditto, Al.
- 100-pound Niles steam hammer.
- 50x12 Nicholson & Waterman horiz. boring, drilling and milling machine, Al.
- 60" Pond vert. boring and turning mill.
- 48" Bickford ditto, Al.
- 11" Lowell slotter.
- 14" Prentiss crank shaper, Al.
- 16" Gould & E. ditto.
- 28" Smith & Mills shifting belt.
- 40" Michel sld. hd. drill, B. G. & P. F.
- 40" Gould & E. ditto, Al.
- 60" Keystone radial.
- 25" Barnes back-gear & power-feed drill.
- 2 No. 2 Becker vert. millers with rotaries.
- No. 15 Garvin plain miller, B. G.
- No. 1 Brown & Sharpe univ., with arm.
- No. 1 Brown & Sharpe univ., without arm.
- No. 6 Brainard plain miller, Lincoln type.
- Nos. 2, 3 and 4 Landis grinders.
- 27x18 Springfield surface grinder.
- Nos. 0 & 1 P. & W. screw mach., wire feed.
- 19" 3" Swanscott plate planer.
- 8" 3" power bending rolls.
- Double-end punch and shear, very heavy.
- Also large assortment of other tools. Send for list.

PRENTISS TOOL & SUPPLY COMPANY,
115 Liberty Street, New York, N. Y.
Buffalo Office, Block 36, Machinery Hall,
Pan-American Exposition.
Boston Office, 200 Franklin Street.

Largest Assortment. Immediate Delivery.
Send for Catalogue.

- 1 30"x60" Greene Engine.
- 1 28"x48" Hamilton left-hand Corliss Engine.
- 1 26"x48" Greene Engine.
- 1 10 1/2"x37 1/2"x36" Fitchburg Cross Compound.
- 1 14"x28"x36" Cross Compound Fitchburg.
- 1 13"x26"x16" McEwan Tandem Comp. Engine.
- 1 17"x30" Williams Automatic Engines.
- 1 16"x24" Beck Automatic Engine.
- 2 15 1/2"x15" Armstrong & Sims Engines.
- 1 15"x30" Buckeye Automatic Engine.
- 1 14"x15" Ideal Engine.
- 1 12"x12" Armstrong & Sims Engine.
- 1 10" 18"x12" Ball Tandem Compound Engine.
- 14 Water Tube Boilers, 165 to 200 lbs. steam pres.
- 22 Horizontal Tubular Boilers.
- Several full Railway Equipments.
- Large stock of Machine Tools. Let me know your wants.

FRANK TOOMEY,
127-131 N. Third Street, PHILADELPHIA, PA.
Long Distance Telephone 261-262.

FOR SALE—CHEAP FOR CASH.

- One 18x42 Wetherill-Corliss Engine.
- One each 18x36 and 14x28 Naylor Horizontal Engines, with Goodwin's automatic cut-off governors.
- One 14x16 Straight Line Automatic Engine.
- One new 10x12 Sturtevant High Speed Engine; also Steam Pumps and Steam Traps of various sizes.
- One 1200-light Thompson-Houston Dynamo.
- Two 45 Arc Light Waterhouse Dynamos.
- Return Tubular Boilers from 25 to 125 H. P.; Tanks, Smoke Stacks, Pipe and Boiler Tubes.
- Perfect satisfaction guaranteed.

JOHN HENNING & SON,
1016-20 E. Susquehanna Ave. Philadelphia, Pa.

FOR SALE.

- 2 Band Saw Mills, 1 Brick Plant, 1 Endless Rope Mine Haulage Plant, 4 10-ton Shay Geared Locomotives, 18 standard gauge Flat Cars, Boilers, Engines, Rail and Equipment.
- WANTED—Relay Rail, Second-Hand Equipment, Locomotives, Cars, Etc.**

THE MILLER SUPPLY CO.,
Huntington, W. Va.

Second-Hand MACHINERY

For Immediate Delivery.

- 1 36 in.x36 in.x9 ft. Sellers Planer, 1 head.
- 1 36 in.x36 in.x7 ft. Sellers Planer, 1 head.
- 1 30 in.x30 in.x10 ft. P. & W. Planer.
- 1 32 in.x32 in.x10 ft. P. & W. Planer.
- 1 3 Spindle Jones & Lamson Drill Press.
- 1 6 Spindle Nut Tapper, 1/2 in.
- 1 10 in New Haven Shaper.
- 1 Bement Traverse Shaper, 60 in. table, 14 in. Stroke.
- 1 Bement Traverse Shaper, 72 in. table, 12 in. Stroke.
- 1 No. 1 Brainard Universal Milling Machine.
- 1 No. 4 Lodge & Davis Universal Milling Machine.
- 1 Portable Air Compressor, motor driven.
- 1 No. 7 Long & Allstatter Punch.
- 1 20 in.x21 ft. Johnson Engine Lathe.
- 1 46 in.x24 ft. Engine Lathe.
- 1 48 in.x24 ft. Engine Lathe, triple geared
- 1 14 in.x6 ft. Blaisdell Engine Lathe
- 1 16 in.x8 ft. Blaisdell Engine Lathe.
- 1 24 in. Gisholt Turret Lathe.
- 1 28 in. Gisholt Turret Lathe. (New.)
- 1 60 in. Heavy Radial Drill, 5 in spindle.
- 1 42 in. Betts Radial Drill.
- 1 3 in. National Bolt Cutter.

U. Baird Machinery Co.
123-125 Water Street,
PITTSBURG, PA.

Second-Hand Machinery

FOR IMMEDIATE DELIVERY.

- 3-72"x18" Standard Tubular Boilers.
- 5-60"x10" Standard Tubular Boilers.
- 3-54"x14" Standard Tubular Boilers.
- 3-Ideal Automatic engines.
- 1-Compound duplex pump, size 12 and 18 1/2 x 10 1/2
- 2 12.
- 1-Compound duplex pump, size 14 and 20 1/2 x 12.
- 1-Duplex pump, 14x8 1/2 x 10.
- 1-Duplex pump, 10x6 1/2 x 10.
- 1-Duplex pump, 7 1/2 x 4 1/2 x 10.
- Corliss engines, generators, heaters, wood and iron working tools.

WISCONSIN MACHINERY CO.
125-127 W. Water St. Milwaukee, Wis.

BARGAINS IN Good Second-Hand Machinery.

- 72 inch Boring and Turning Mill.
- 10 Ton De-La-Vergne Ice Machine.
- 12x12 and 13x12 Armington & Sims Automatic Engine.
- 19x6 Chambersburg Automatic Engine.
- 250 Horse Corliss Engine, Geo. Corliss make.
- 75 Horse Naylor-Corliss Engine.
- No. 3 and 4 Baker Pressure Blowers.
- No. 7, 8, 9, Sturtevant Pressure Blowers.
- 26x10 ft. New Haven Engine Lathe.
- 12, 14, 15, 16 inch Engine Lathes.
- 20, 24, 25 inch Drill Presses.
- Steam and Hot Pumps, 50 Horse Berryman Heaters.

J. NUTTALL,
1743 N. 5th Street, Philadelphia, Pa.

CONTRACTORS' PLANT

- 1 Lidgerwood Double 8 1/2 x 10 Double Drum Hoisting Engine.
- 1 16"x30"x42" Cooper Corliss Tandem Compound Engine, with 15 ton fly wheel, 18"x38" face.
- 1 Ingersoll Compressor, 16-16x24.
- 1 Morris Co. Compressor, 9 1/2-9 1/2x15.
- 1 Rand Belt Driven, 6"x6".
- 2 Cockburn Concrete Mixers.

J. C. SEXTON, 18 Broadway, New York.

CRUSHERS.

- 1 15x9 Farrell crusher.
- 1 No. 2 multiple jaw Blake crusher.
- 1 No. 4 multiple jaw Blake crusher.
- 1 No. 5 multiple jaw Blake crusher.
- 1 20" Sturtevant mill.
- 1 15" Sturtevant mill.
- 1 set Krom rolls.

W. J. CARLIN COMPANY,
25th and Railroad Sts., Pittsburg, Pa.
New York Office, 514-515 Park Row Bldg., New York City.

MACHINERY.

BOILERS—HORIZONTAL.

- (Second-hand.)
- No. B-97-36"x8", 25 3/4" tubes. No. B-106-50"x14", 41 1/2" tubes. No. B-96 1/2-30"x8", 20 3/4" tubes. No. B-99-40"x10", 33 3/4" tubes. No. B-105-48"x14", 47 3/4" tubes. No. B-109-54"x15", 64 3/4" tubes. No. B-112-60"x12", 46 3/4" & 2 1/2" tubes. No. B-116-60"x6", 28 1/2" tubes (5). No. B-125-72"x5 1/2", 61 1/4" tubes. No. B-102-60"x12", 70 3/4" tubes. No. B-100-44"x10", 38 3/4" tubes. No. B-113-60"x15", 52 1/4" tubes. No. B-114-60"x15", 54 1/4" tubes. No. B-104-48"x12", 34 3/4" tubes. No. B-98-40"x10", 33 3/4" tubes. No. B-96-54"x11", 71 3/4" tubes. No. B-99 1/2-40"x10", 34 3/4" tubes.

BOILERS—VERTICAL.

- (Second-hand.)
- No. B-157-42"x36", 109 2/3" tubes, submerged.
- No. B-148-30"x35", 42 2/3" tubes. No. B-84-30"x35", 68 2/3" tubes. No. B-149-28"x35", 37 1/2" tubes. No. B-162-28"x35", 37 1/2" tubes. No. B-151-30"x6", 55 2/3" tubes, submerged.
- No. B-150-30"x8", 50 2/3" tubes, submerged.
- No. B-160-30"x6", 37 2/3" tubes.
- (New.)
- No. B-144-24"x6", 24 2/3" tubes.

PORTABLE BOILERS.

- (Second-hand.)
- No. B-131-15 H. P., 24 3/4" tubes. No. B-133-18 H. P., 28 3/4" tubes. All second-hand, in good working order.

ENGINES—HORIZONTAL.

- (Second-hand.)
- No. B-1-10"x16", No. B-6-7"x10", No. B-7-7 1/4"x10", No. B-22-9"x18", No. B-27-13"x18", No. B-28-11"x16", No. B-29-7 1/2"x14", No. B-37-12"x20", No. B-40-12"x15", No. B-44-14"x20", No. B-45-5"x6", No. B-46-18"x27", four-valve.
- No. B-47-4"x8", No. B-12-12"x20", No. B-12-6 1/2"x12", No. B-17-8"x12", No. B-20-10"x12", No. B-16-6"x10", No. B-7-6"x12", No. B-11-8"x12", No. B-21-12"x24", No. B-39-14"x24", No. B-41-7"x10".
- (New.)
- No. B-4-6"x8", No. B-9-7 1/4"x7 1/2", No. B-13-5"x12", No. B-14-8"x10", No. B-23-11"x14", (2), No. B-36-9"x12", No. B-15-10"x14", No. B-31-10"x12", No. B-18-10"x15", (2), No. B-10-8"x10".

ENGINES—VERTICAL.

- (Second-hand.)
- No. B-51-4"x5", No. B-52-3"x5", No. B-53-4 1/4"x7", No. B-57-5"x7", No. B-58-5"x6", No. B-59-8 1/2"x5 1/2", No. B-61-5 1/2"x16", No. B-67-8"x8", No. B-68-9"x9", (double), No. B-70-9"x9", No. B-64-6"x6".
- (New.)
- No. B-50-3 1/2"x3 1/2", No. B-54-4 1/2"x3 1/2", No. B-55-6"x6", No. B-56-4"x6", No. B-65-7"x7", No. B-49-10"x10", Second-hand engines in good order, and all equipped with usual fixtures.

ENGINES—GASOLINE.

- (New.)
- No. B-89-7 H. P. No. B-90-6 H. P.

AIR COMPRESSORS.

- (Second-hand.)
- No. B-501-5"x5", No. B-504-9 1/2"x9 1/2"x10", No. B-505-9"x15 1/2"x12", No. B-507-water air compressors (3), No. B-508-water air compressors (2), No. B-509-water air compressors (2), No. B-510-2 1/2"x6 1/2" (double), No. B-500-8"x16"x12", No. B-502-6 1/2"x8 1/2"x6", All in good order.

Write us for any machinery wanted, or if you wish to exchange or sell. To close out the above quickly will make specially low prices for prompt cash.

C. C. Wormer Machinery Co.
24-40 Shelby Street,
DETROIT, MICH.

BARGAINS.

- 14 in x6 ft. Eng. Lathe, Young.
- 14 in x6 ft. " " Prentice.
- 14 in x8 ft. " " Davis.
- 24x16 ft. " " Fifeild.
- 20 in. B. C. Drill, Hoefer.
- 24 in B. C. Drill, New Haven.
- 25 in B. C. and Power Feed Drill, Hoefer.
- 30x30x12 ft. Planer, 2 heads, Belmer-Eames.
- Sensitive Drills, Power Presses, Millers, Screw Machines, etc.
- If you wish to buy or sell, let me know. Can give bargains in new and second-hand machines a all times for immediate shipment.
- GEO. E. AFFLECK,**
109 Liberty St., New York.

FOR SALE.

- 1 Fairbanks Gasoline Engine (30 horse power). This engine is new and complete in every particular, including a 40-gallon galvanized tank, 1 box batteries, fixtures, piping, belting, and an extra 55-gallon galvanized gasoline tank. Will sell at a great bargain. 1 Steam Fire Engine, late from Baltimore department. 4 Hoisting Engines, 12, 15, 18 and 25-horse power respectively. A number of single and duplex Steam Pumps, Cistern, Deck and Deep Well Pumps (new). General machine work and repairing. I make a specialty of repairing Steam Pumps, High-speed and Gasoline Engines.

W. W. KIRK,
406 E. Pratt St., Baltimore, Md.

2 Osgood Dredges

FOR SALE.
Hull 70x17x6 ft. with 6x29 ft. pontoons. 1 1/2 Yd. Dipper Steel Boom, 45 ft.

J. C. SEXTON,
18 Broadway, NEW YORK.

For Sale

We offer the following items
subject to prior sale:

ENGINES.

- 2 250 H. P. high-duty Atlas, rope driven.
1 pair Williams engines, 250 H. P. each.
1 22x60 Rankin-Fitch Corliss.
1 12x34 Putnam.
1 13x34 Fitchburg.
1 20x30 slide valve.
1 18x28 Nicols Burr.
1 22x36 Wright Corliss.
1 13x22x15 cross compound Armstrong & Sims.
1 15x17 Ideal.
1 15x16 Ball.
1 13x12 Ball.
1 12x12 Armstrong & Sims.
1 pair twin engines, 15x22.
1 20x40 automatic, with Nordburg governor.
1 McEwen compound.
1 Payne compound.
1 10x20x20 Rice automatic.
1 14x20 Atlas slide valve.
1 12x20 Atlas slide valve.
1 11x16 Atlas slide valve.
1 12x24 automatic.
1 12x24 slide valve.
10 Tiff engines, 9x12.
10 Tiff engines, 8x12 (reversible).
1 10x18 Buckeye.
1 11x16 Russell automatic.
1 8x14 Taylor-Reck.
6 10x22 plain slide valve.
1 9x14 slide valve.
1 10x18 vertical.
1 9x9 vertical Racine.
1 9x15x9 Westinghouse.
1 13x22x13 Westinghouse.
1 14x24x14 Westinghouse.
1 12x20x12.
1 10x8x10.
1 6x6.
1 11x10 Standard.
1 10x9.
1 12x11.

GAS AND GASOLINE ENGINES.

Gas and gasoline engines from 1 to 50 H. P.

BOILERS.

- 20 60x18 tubular.
10 60x16 tubular.
12 54x16 tubular.
4 72x20 tubular.
4 72x18 tubular.
1 Heine safety boiler, 80 H. P.
1 Sterling water tube, 125 H. P.
1 200 H. P. internally fired boiler.
1 25 H. P. upright fire box boiler.
1 35 H. P. upright fire box boiler.
1 40 H. P. upright fire box boiler.
1 45 H. P. upright fire box boiler.
1 50 H. P. upright fire box boiler.
1 60 H. P. upright fire box boiler.
1 90 H. P. "Economic" Erie City.
1 450 H. P. Hazelton tripod boiler.
1 80 H. P. Hazelton tripod boiler.
Also fire box boilers of all sizes from 1 to 50 H. P.

DYNAMOS.

- 1 T-H direct 600-light.
1 T-H direct 500-light.
1 Westinghouse alternator, 1000-light, 1000-volt.
1 60 k.w. Slattery alternator.
Also have electric motors of all sizes from 1/4 to 30 H. P.

1 Standard Gauge Rogers American Type Locomotive.

Diameter of cylinder, 15 1/2 in.; stroke, 22 in.; number of drivers, 4; thickness of tires, 1 1/4 in.; fire box, 4 ft. 3 in. by 2 ft. 10 in. by 4 ft. 6 1/2 in.; weight, 30 tons; complete with tender; has been rebuilt from the ground up, and is in first-class condition.

TANKS

- 2 36x12 in. high.
2 30x14 in. high.
1 40x10 ft. long.
1 open tank, 24 in. by 5 ft. long.
2 galv. 24 in. by 7 ft. 8 in. long.
1 jacketed galv. 30x30 in. high.
3 22 in. by 3 ft. 4 in. high.
1 24 in. by 3 ft. 6 in. high.
1 galv. jacketed, inside diam., 23 in.; outside, 27 in.; inside depth, 24 in.; height over all, 28 in.
3 24 in. by 4 ft. 6 in.
1 50-gal. kettle.

Write for our Complete Catalogue No. 239.

We are constantly adding to our stock of machinery and supplies, and will be pleased to estimate on your requirements.

Chicago House Wrecking Co.

W. 35th and Iron Sts., CHICAGO.

STEAM ENGINES.

- 1 20" and 36"x48" Tandem Hamilton Corliss, wheel 22"x56" face.
1 34 in.x60 in. Geo. H. Corliss rolling mill engine, right hand wheel, weighing 40 tons, 26 ft. diameter.
1 36x72 Wheelock.
1 29x72 Wheelock.
2 30x60 Harris Corliss right and left hand wheels, 38" face by 20 ft. diameter.
1 24"x48" Bates Corliss.
1 20"x48" Geo. H. Corliss.
1 16"x42" Bates Corliss.
1 10"x34" Harris Corliss.
1 11"x30" Brown.
1 16 1/2 in. x25 in. x15 in. cross compound Armstrong & Sims.
1 14 in. and 24 in. x14 in. Westinghouse compound.
1 16 in. and 27 in. x16 in. Westinghouse compound.
1 13"x12" Erie Ball.
1 12"x12" Ball automatic.
1 13 in. x14 in. Watertown automatic.
1 14 in. x13 in. Armstrong & Sims automatic.
1 15 1/2 in. x16 in. New York safety automatic.
1 13 1/2 in. x15 in. Armstrong & Sims automatic.
1 16 in. x16 in. Ball automatic.
1 18 1/2 in. x18 in. Ideal automatic.

BOILERS.

- 2 375 H. P. Sterling water tubes for 150 lbs.
2 200 H. P. National water tubes for 125 lbs.
2 175 H. P. Sterling water tubes.
3 60"x16" Return Tubulars.
2 500 H. P. Hazelton boilers.

CONDENSERS.

- 1 600 H. P. Snow condenser.
3 325 H. P. Davidson condensers.

Railway Generators.

- 4 300 K. W. M. P. 4, General Electric.
3 100 K. W. M. P. 4, General Electric.
2 111 K. W. M. P. 4, Westinghouse.
4 60 K. W. Edison bi-polar.

MOTORS.

110, 220, 500-volt motors, from 1 H. P. to 200 H. P.

ALSO

ALTERNATORS,
ARC DYNAMOS,
LAMPS, STREET-CAR, ETC.

ROSSITER, MacGOVERN & CO.

Electrical and Steam Machinery,

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SEND FOR NEW CATALOG.

BIG BARGAINS.

General Electric,
three phase, sixty cycle, Inductor Motors

- 1 15-H. P. 110 volt, speed 900, price \$350.00
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1 75-H. P. 550 volt, speed 600, price \$1100.00
Chicago delivery, ready to ship. Hundreds of other bargains in stock. GUARANTEE ELECTRIC CO.
133 S. Clinton St., CHICAGO
Chas. E. Gregory, President.

SPECIAL GAS ENGINE BARGAINS.

50 H. P. Foos, 38 H. P. White & Middleton, 25 H. P. New Era, 35 H. P. Fairbanks-Morse, 15 H. P. Otto, 12 H. P. Otto, 10 H. P. New Era, 2-1/2 H. P. Fairbanks-Morse, 15 H. P. Chicago, 12 H. P. Chicago, 2-7/8 H. P. Chicago, 2-3/4 H. P. Chicago, 2 H. P. Fairbanks-Morse, 2-2/3 H. P. Fairbanks-Morse. Engines, all sizes, bought, sold and exchanged. Address
A. H. McDONALD, 36 W. Randolph St., CHICAGO.

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Wood-Working Machinery

all in good condition. Engines for Lighting Stations and Trolley Roads our specialty.

H. C. BAKER & CO.,

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FOR SALE.

Lot of Boilers, Engines, Lathes, Planers, Drill-Presses, 1 Large Fire Pump, Steam Pipe, all sizes, and about 500 Tanks of different sizes.

WILLIAM ECKBOLD'S SONS,

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MACHINERY BARGAINS.

1 3-sided Planer and Matcher, Frank, \$175.
1 38" Connell & Dangler Circular Re-saw, \$125.
1 42" 3-roll Egan Sander, \$100
1 30" Single Drum Sander, \$45.
2 20" Pony Planers, each, \$25.
1 24" Single Surfacier, \$100
4 Engines. 2 Boilers.
Write for complete list.

Cleveland Belting & Machinery Co.

CLEVELAND, OHIO.

FOR SALE.

IRON TUGBOAT IVANHOE,

length over all 66 feet, beam 15 feet, depth of hold 7 feet; engine 15 x 15 sq.; carries 30 tons coal; tanks will carry her 30 hours; in good running order. Now at Philadelphia, Pa. Apply to

GEORGE W. EGAN, Charleston, S. C.

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One 8-horse power Upright Engine,
One 9-horse power Upright Boiler.
One 11-horse power Upright Boiler.

E. J. CODD CO.,

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FOR SALE.

We carry a large line of Engines, both new and second-hand, in stock—cross-compound Corliss, tandem-compound Corliss and simple Corliss from 1500 H. P. down to 75 H. P.

Automatic Engines, every size and make—slide and piston-valve Engines from 1000 H. P. down to 5 H. P.

BOILERS—Water tube, horizontal tubular, locomotive Boilers, etc.

HEATERS—Open and closed heaters, all sizes and makes.

MACHINE TOOLS—Lathes, planers, shapers, drill presses, chucks, emery wheels, power punches, etc.

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PUMPS—All sizes and makes from 2,000,000 gallons down.

CONDENSERS—Deane, Nordberg, etc.

ELECTRICAL MACHINERY.

1 600-light Edison incandescent dynamo.

2 400-light Edison incandescent dynamo.

1 60-light Thomson-Houston incandescent dynamo.

1 65-light Brush arc.

1 60-light Wood arc.

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One 18" muck mill, one 18" sheet-bar mill, one squeezer, iron and wooden jib cranes, travelling cranes, rotary shears, hydraulic pumps, floor-plate, buggies, etc.

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4000, 1200, 700 and 400 pounds double-legged Morgan.

275 pounds single-legged Kline.

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One pair of Pictet horizontal Ice Machines, consisting of two Corliss Engines, 16"x38", and ammonia Compressor, 10"x36" (ammonia end being new and manufactured by the Vilter Manufacturing Co., Milwaukee, Wis.); capacity of each machine 25 tons ice or 60 tons refrigerating.

The above is a very fine machine, thoroughly overhauled, and has just been sold to us by a Pittsburgh firm, who replaced it with a machine of much larger capacity. Price \$4500 f. o. b. Pittsburgh.

PUMPS—FOR WATER-WORKS.

One Worthington Duplex 25x20x25, rods 3 1/2" diameter, displaces 32,000 gallons per stroke, 110 strokes per minute. Total capacity over 5,000,000 gallons in twenty-four hours. Weight about 40,000 pounds.

This pump is as good as new and has been taken out of our city water-works, being replaced by one of much larger capacity.

One Gaskill Compound Pump, 16" L. P. cylinder, 22" H. P. cylinder, 18" stroke, 104" fluid cylinder, suction 14", discharge 12", 135 pounds pressure. Used but five months.

Two Gordon Compound Pumps, non-condensing duplex, inside plunger, H. P. steam cylinder 12" diameter, L. P. cylinder 20" diameter, 11" water, stroke 18". Capacity of each engine 1,250,000 gallons per twenty-four hours, the suction being equal to not more than 20" vertically, and forcing into a reservoir stand-pipe or mains against a pressure of 110 pounds, at a piston speed not to exceed 100 feet per minute, with a steam pressure of 90 pounds.

Accompanying these engines are all the necessary attachments to connect to the suction and discharge pipe inside the pump-house; also the following: One vacuum gauge, one steam gauge, one combination water-pressure gauge, one eight-day clock. All the above mounted on black walnut board. All the necessary valves on suction and discharge and steam pipe.

Engines have copper air chambers, and are lagged with black walnut lagging.

The above is a new outfit never erected and cost \$8000. We will sell same very low.

1 18"x12"x20" Cameron single Pump.

1 20"x6"x24" Wilson & Snyder duplex.

1 18 1/2"x10 1/4"x10" Worthington compound.

And 100 smaller sizes, duplex and single.

SPECIAL PUMP.

One Silsby Fire Engine, 1000 gallons per minute, nearly new. Will be sold cheap. Can supply photograph.

Send for our April stock-list, which gives full particulars of what we have. We cannot advertise one-hundredth part of it.

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We own about 2000 tons of

60-lb. STEEL RELAYING RAILS
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We also handle new or second-hand light-weight Rails.

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ATTENTION!

To Eclipse Machine & Boiler Works

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CHICAGO, ILLS.

ICE MACHINES.

One 75-ton, Vilter.
Two 15-ton machines.
One 10-ton machine.

BOILERS.

Vertical, Tubular and Fire-box, all sizes.

ENGINES.

One 10x15 Buckeye, automatic.
One 8x16 Buckeye, automatic.
One 11x15 Bay State, slide valve.
Two 10x16, slide valve.
One 8x12, slide valve.

PUMPS.

One 10x7x10 Smith-Vaile.
One 4x3x14 Duplex.
One 4x3x14 Dean Duplex.
One No. 5 Knowles.

WOODWORKING MACHINERY.

One 24" Buss Machine Works Planer.
One 30" 3-roll Perry Sander.
One Door Relisher and Wedge Cutter.
One 24" Surfer, incline bed.
One Double Spindle Shaper.

Write for prices before purchasing elsewhere.

FOR SALE.

Wood-Working Machinery

of the most improved patterns at reasonable prices. Send for list of 150 machines.

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ROLLING MILLS.

We have purchased the entire plant of the Iron Gate Rolling Mill in Virginia, and will have for sale some first-class second-hand Mill Machinery, including Shears, Trains of Rolls, Engines, Boilers, etc., etc. If you are in the market for any of this equipment, let us know your wants.

POULTER & CO.

410 Bullitt Building, PHILADELPHIA, PA.

TRY US FOR AN ENGINE

New or Second Hand.

125 to 250 H. P. Corliss and Compounds.
40 to 50 H. P. High Speed Automatics.
15 to 75 H. P. Slide Valve
400 Light, 110 Volt Dynamo.
Send for our list of others.

PAYNE CO., Elmira, N. Y.

FOR SALE CHEAP.

One 50-H. P. Locomotive Boiler; one each 100-H. P., 60-H. P., 9-H. P. and 4-H. P. Vertical Boilers, all of the above as good as new; very cheap; 60-H. P. Horizontal Tubular and 15 and 25-H. P. Vertical Boilers, in good condition; one 20-H. P. Otis Double Cylinder Steam Elevator, all complete with drum and cable. A fine heavy outfit for factory or any large building where steam is used; one 150-H. P. 22"x30" Farquhar (York, Pa.) Plain Slide Valve Engine, fly wheel 10'x30", all complete in running order; big bargain in new Lundell Slow Speed Electric Motor, 15-H. P., 220 volts; Steam Engines, all sizes; Gas Engines, Job Printing Presses, all sizes; Wood-working Machinery, Electric Motor Fans, Shafting, Belting and Pulleys. Always positive bargains at

MENGEL'S MACHINERY EXCHANGE,
26 E. Balderston St., near Light,
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FOR SALE.

One practically new 20x42 Harris-Corliss Engine, price \$1800; one Erie-Ball Engine, 13x12, perfect order, \$600; one Ideal Engine, 13x12, \$650; one 12x30 Harris-Corliss Engine, nearly new, run one year, \$700; one 12x36 Corliss Engine, \$700; one 26x48 four-valve Engine complete, in good order, \$1000; one 18x48 four-valve Engine complete, \$800; one 24x48 Automatic Wright Engine, \$800; two Manning-Corliss, 150 H. P. each, good for 120 lbs. of steam, \$600 each; one Boiler, 66" diam., 16' long, horizontal tubular, 100 H. P., 3 1/2" tubes, run 20 lbs. steam, all complete, \$350, warranted 90 to 100 lbs. steam, as good as new.

F. H. DAVIS & CO.

53 State Street, BOSTON, MASS.

FOR SALE.

Can Ice Making Machinery,

INSTALLED BY

YORK MANUFACTURING CO.,
(60 Ton Daily Capacity)

complete with 2 Compound Compressors, 30 ton each. Distilling Tanks, Receivers, Boilers, all Piping, Dynamo and Engine for Electric Lighting and Driving Travelling Cranes for handling cans. About 1500 cans, used 2 years, and can be bought right, either to be used on premises or removed. For full particulars, address,

S. T. LUND,

120 High Street, BOSTON, MASS.

For Sale at a Bargain.

LOCOMOTIVES—3 standard gauge locomotives with tenders; 2 with 16x24 cylinders; 1 with 18x24 cylinder. 1 42" gauge H. K. Porter saddle tank locomotive, cylinder 9x14".
STEAM SHOVELS—1 Marion, style "A", with 1 1/2 yd. dipper. 1 Osgood with 3/4 yd. dipper.
ENGINES—1 20x40x36 Wright Corliss tandem compound engine. 1 18x24x42 Fitchburg tandem compound engine. Also several others of different styles and horse power.
PUMP—1 Worthington compound duplex steam pump, No. 20,689; size 12x18 1/2 x10 1/2 x10.
HOISTERS—1 pair of 14x24 link motion mine hoisting engines. Also several others.
The above can all be seen at our yards in Newark, N. J. Correspondence solicited.

GRANT & WILLIAMS,

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FOR SALE OR EXCHANGE—BOILERS, PUMPS, ENGINES, Etc. One 5"x25" double cylinder, single drum Lidgetwood Hoisting Engine, in first-class condition. A large assortment of tubular and fire-box Boilers, Corliss, Slide Valve and Upright Engines, Single and Duplex Steam Pumps, Feed Water Heaters, etc. Goods constantly listed with us. All goods guaranteed as represented. Send for stock list and let us know your wants, and we will supply you.
H. MOORE CO., 2d & Sycamore Sts., Milwaukee, Wis.
Steam Fitting and Machine Shop.

FOR SALE.

Bar Mill, complete with muck and finishing rolls. 12"x16"x18" Cross Compound Boiler Engine, in first-class condition.
Also Buy and Sell Relaying Rails, Locomotives and Cars.

JUSTICE COX, JR. & CO., Limited,

552-554 Bullitt Building, Philadelphia, Pa.

FOR SALE.

STEAM SHOVELS.

3 Marion, Model "G" second hand, 2 1/2 yd. bucket, friction feed.
1 Marion, Model "G" second hand, 2 1/2 yd. bucket, crowding engines, armor clad.
4 Marion, Style "A" second hand, 1 1/2 yd. bucket, friction feed.
1 Marion, Model "K" second hand, 2 1/2 yd. bucket, crowding engines, armor clad.
1 Marion, Style "B" second hand, 1 1/2 yd. bucket, friction feed.
1 Bucyrus, 55-ton, second hand, 1 1/2 yd. bucket, friction feed.
2 Bucyrus, 45-ton, second hand, 1 1/2 yd. bucket, friction feed.
1 Osgood Snovel.

LOCOMOTIVES.

4 9x14, 36-inch gage saddle tank. 2 7x12, 36-inch gage saddle tank. 3 6x10, 36-inch gage saddle tank. 1 9x16, 36-inch gage Mogul.
2 11x16, 36-inch gage Mogul.
1 8x12, stand. gage saddle tank (Porter).
3 19x24, stand. gage, 4-whl. con'ted switchers.
3 17x14, stand. gage, 4-whl. con'ted switchers.
22 standard gage, 8-wheel road engines.
10 standard gage, 8-driver, 2-wheel truck, Consolidated.
21 stand gage, 6-driver, 2-whl. truck, Mogul.
1 15x22, stand. gage, 6-driver, switch engine.

J. R. PATTON & CO., Ferguson Block, Pittsburg, Pa.

Engine Bargains

100 h. p. 12x24 Buckeye Automatic.
100 h. p. 12x20 Rice Automatic.
150 h. p. 16x42 Fraser & Chalmers Corliss.
150 h. p. 14x30 Cummer 4 valve Automatic.
250 h. p. 12x22x18 Payne Tandem Cpd. Auto.
65 h. p. 12x24 Cooper Slide Valve.
50 h. p. 12x18 Slide Valve.
14x7x10 Smith-Vaile Fire Pump.
200 h. p. Baragwanath Heater.
45 h. p. 11 1/2 x18 Slide Valve.
60x16 ft. Tubular Boiler.
200 h. p. Stillwell-Bierce Heater.

The above are all in first-class condition and ready for shipment.

A. L. DAWSON & CO.,

27-31 W. Washington St., CHICAGO, ILL.

STEAM TUBE FEED

Water Heaters.

One 750 H. P. Steel Shell 34 in.x68 in., 120 tubes 2 in.x68 in., exhaust 14 in., feed 4 in., length 10 ft., weight 3600 lbs.

One 180 H. P., P. & M. Steel Shell 20 in.x58 in., 33 tubes 2 in.x42 in., exhaust 6 in., feed 3 in., weight 1350 lbs.

One 350 H. P., P. & M. Steel Shell 25 in.x60 in., 60 tubes 2 in.x36 in., exhaust 10 in., feed 2 1/2 in., weight 2200 lbs.

ONE DEAN REHEATER. 400 H.P. Exterior shell 40 in., cast iron, interior shell 28 in. steel, length 75 1/2 in., 100 tubes 2 in.x48 in. long. Exhaust inlet 7 in., exhaust outlet 10 in.

These heaters are in good condition and are practically new, and are offered at bargain prices.

The Taunton Locomotive Mfg. Co.
TAUNTON, MASS.

FOR SALE.

Boiler Bargains.

3 125 H. P. 72"x16", 76 4" tubes.
1 Double Deck Hor. Boiler, 60"x14", with steam drum 48"x15", 74 3" tubes.
1 80 H. P., 60" diam., 16' long, 49 4" tubes. All above good for 90 lbs. or more.

10 Hughes Duplex Steam Pumps, 4" suction, 3" discharge; in fine working order.

Cheap to quick buyers. Large line of Vertical and Horizontal Boilers and Engines and Machinery of all kinds.

J. D. MALLORY,

22 Light Street, Baltimore, Md.

ENGINES, BOILERS, DYNAMOS, &c., FOR SALE.

In first-class condition at Lowest Prices in the market.

ENGINES—150 horse Westinghouse Standard; 100 horse Westinghouse Compound; 50 horse Dick & Church Phoenix.

BOILERS—3 100 horse h.t., 100 lbs. pressure; 2 80 horse h.t., 90 lbs. pressure; 1 300 horse water tube.

GAS ENGINES—2 15 horse Otto, all complete.

HEATER—1 Berryman, about 700 h. p.

DYNAMOS—30 light, 60 light, 100 light, 125 light, 150 light, 400 light, 700 light. Also several arc dynamos. All dynamos of standard makes and voltage, and complete.

GENERATORS—100 K.W., 550 volts, multipolar; 225 K.W., 550 volts; 60 K.W., 550 volts.

ALTERNATORS—600 light Westinghouse; 2 1400 light Westinghouse. Also some larger ones.

The above is a partial list only of what we have on hand. Write us for anything you want and get our prices. Also have a large line of Pulleys, Belting, Hangers and General Factory Supplies, Pipe, &c.

Everything all ready to put right into service.

American Electric Supply & Mfg. Co.

27 Thames Street, New York City.

PARTIAL LIST OF SECOND-HAND MACHINERY.

2 120-h. p. 60"x18" Tubular Boilers.
1 80-h. p. 60"x18" " "
1 60-h. p. 51"x14" " "
1 100-h. p. 12x12 Ball Automatic Engine.
2 18x12x10 Worthington Duplex Pumps.
2 34 Exhaust Fans.
1 60-h. p. 10x12 N. Y. Safety Power Automatic Engine.
1 80-h. p. 12x20 Baker Automatic Engine.
1 13x10x18 Smith-Vaile Single Pump.
1 12-in. Centrifugal Wrecking Pump with Direct Connected Engine.
Also a large number of Smaller Engines, Boilers, Pumps, Heaters, etc.

RAINIER & WILLIAMS,

63 S. Canal St., CHICAGO, ILL.

FOR QUICK DELIVERY.

18", 22", 24", 26", 28", 30",
32" and 36" Lathes. Any length.

SOHUMAOHER & BOYE,
Cincinnati, O.

FOR SALE.

Having installed water works, the town of Southern Pines, N. C., offers for sale a

Rumsey "Village Fire Engine,"

almost new, in perfect condition, complete with all nozzles, fittings and wrenches. Also hose reel and 400 feet 2-inch hose.

For price and full description address

H. O. PARKER, Clerk,
Southern Pines, N. C.

John A. Waters & Co.

13 1/2-17 1/2 S. Eighth Street,
RICHMOND, VA.

New and Second-Hand Boilers, Engines, Mining Outfits and General Machinery.

One Complete Stem Fertilizer Plant, including 1 Exhaust Fan, fittings and piping; 90' Chain Belt and Sprocket Wheels; Drier and fittings; Conveyor and belting; 22' Conveyor and fittings; Elevator Sprocket Wheels and Chain Belting; Scientific Attrition Mill, No. 14; Exhaust Fan; 42' Piping; Dust Collector and connections; Reel and fittings; Transmitting Rope Sheave; 1 large Breaker; 1 Combination Breaker; 1 Magnetic Separator; 1 Self Feed Ross Cutter, No. 116; Conveyor and Elevator; 1 30' New American Turbine Wheel, all bearing parts new.

MISCELLANEOUS FOR SALE.

1 Barnhart center ballast unloading plow.
1 Western grader.
7 Steel dump tubs.

Several Township and Rooter plows.

W. J. CARLIN COMPANY,

25th and Railroad Sts., Pittsburg, Pa.

New York Office, 514-515 Park Row Bldg., New York City.

FOR SALE CHEAP.

One Marine Boiler, 180 H. P. One Erie City Box Bed Engine, 50 H. P. Two Locomotive Boilers, 30 H. P. One 6"x12" Rock Crusher. One ten stamp Fraser & Chalmers Mill. Three Concentrators, one Golden Gate, two Embury. One Frue Vanner. One No. 10 Cameron Pump. One 24" Buhr Mill. One Electric Separator. One Fairbanks Scale, No. 8, 2,000 lbs. capacity. One Pulometer Pump, No. 4.

All of the above in good and first-class order. Will make especially low prices to move. Write for particulars.

J. B. KENDALL, Washington, D. C.

STEAM SHOVELS FOR SALE OR HIRE.

1 Barnhart 3 yard standard-gauge steam shovel
2 Style "A" Marion standard-gauge 1 1/2 yard steam shovels.
1 Model "G" Marion steam shovel.

W. J. CARLIN COMPANY,

25th and Railroad Sts., Pittsburg, Pa.

New York Office, 514-515 Park Row Bldg., New York City.

FOR SALE.—Engine, 12x16, \$300. Three Tractor Engines, 10 and 12-horse, \$300 each. 10 and 12-horse Portable on wheels, \$200 each. Engine Lathe, 20" swing, \$150. 16" Speed Lathe, Pratt & Whitney, \$60. Pratt & Whitney Drill Press, \$15. Five Boilers, 50"x18", 20 flues 6", \$300 each. Upright Boilers, Engines all sizes. Double Saw Mill, Brownell make, 35' carriage, 3 head blocks, complete, \$350. 35 Engines and Boilers, from 6 to 100-horse, at buyers' prices. D. L. CASEY MACHINE CO., Springfield, Ohio.

Screw Machines.

3 No. 5, Warner & Swasey.
3 No. 6, Warner & Swasey.
Nearly new.

GEO. H. BOWLER,

506-507 Williamson Bldg. CLEVELAND, O.
Warehouse—20-22 Frankfort Street.

FEED-WATER HEATERS

2nd-Hand 80, 160 and 250 h. p. Berryman, 200 h. p. Goubert, 150 and 600 h. p. Wainwrights, 500 h. p. National, 600 h. p. Stillwell-Bierce Open Heater. All guaranteed. **F. L. PATTERSON, Havemeyer Bld'g, N. Y.**

2D-HAND BERRYMAN HEATERS,

all sizes. Taken in trade for our Improved Berryman. In perfect order. Tested and guaranteed. Prices reasonable. **BENJ. F. KELLEY & SON, Makers, 91 Liberty St., N. Y.**

"BLOWERS"

Wanted, Fan and Pressure Blowers—all makes and sizes. Send me full particulars at once.

A. ASHER, 123 Liberty St., cor. Greenwich, NEW YORK.

Wood-Working Machinery!

1 Three-Sided 8" Moulding Machine. 1 Friezing Machine. 1 Panel Raiser. 2 Jig Saws. 1 32" Wood Turning Lathe. 1 Tenon Machine. 1 24" Single Surfer. Planer and Matcher. 1 32"x22" Wood Lathe. 1 Foot Power Miter. 1 8" Outside Moulding Machine. 1 Hand Saw 6' long. 1 Cut-Off Saw Table. 1 Single Saw Arbor.

Also Iron-Working Machinery, Engines, Boilers, Hoisting Engines, Electrical Machinery, Etc., Etc.

CARLIN MACHINERY & SUPPLY CO.,
Lacock & Sandusky Sts.,
ALLEGHENY, PA.

FOR SALE at Attractive Price,
6,000 ft. of 12-in. Cast Iron
Water Pipe,

Has been used once. Address
D. H. LOPEZ, Beaufort, S. C.

FOR SALE.

I have retired from active business and wish to dispose of a Splendid Little Circular Saw Mill Plant; 10x24-in. Engine, Two 40-in. x18-ft. Boilers, Variable Friction-Feed Single Saw Mill, made by Brennan & Co., Louisville, Ky.—all in shape for work. Plenty of timber in easy hauling distance. I mean to sell and am willing to sell at a great sacrifice.

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- 12 9x14, 36" gauge, 4-wheel, 12-ton saddle-tank locomotives.
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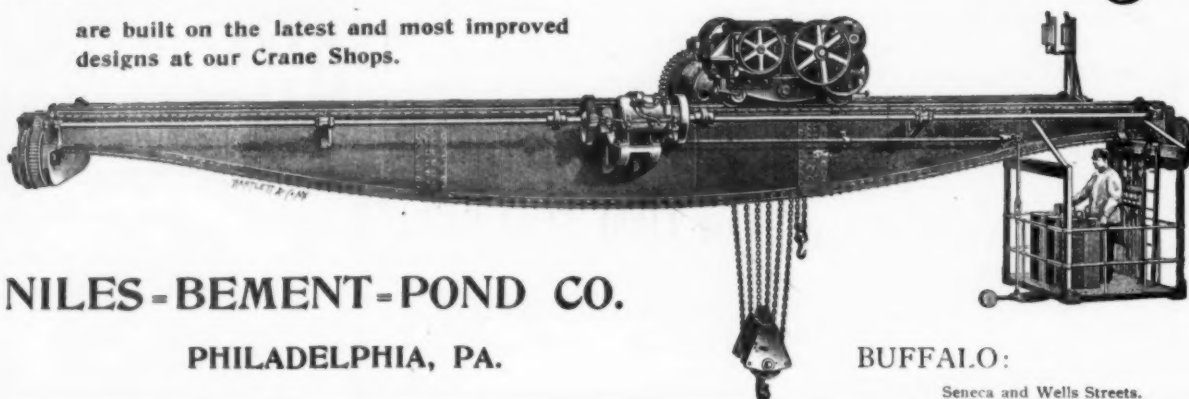
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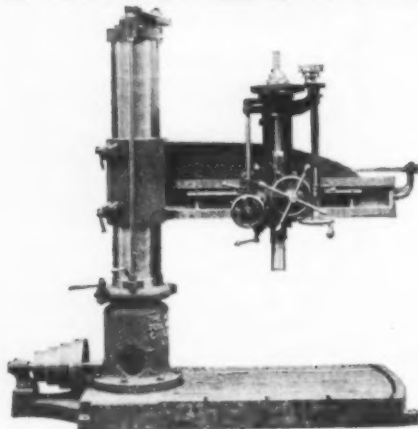
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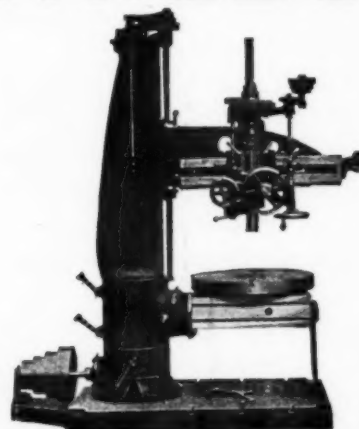


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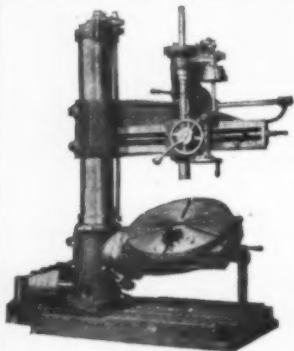
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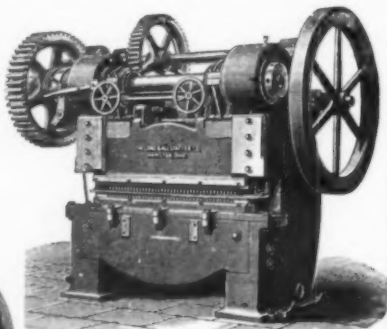
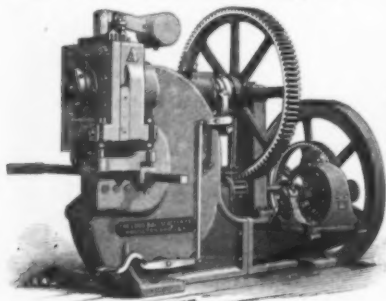
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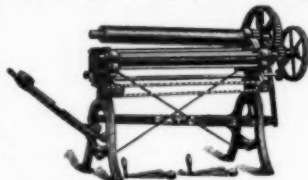


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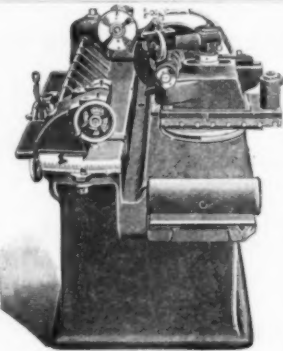
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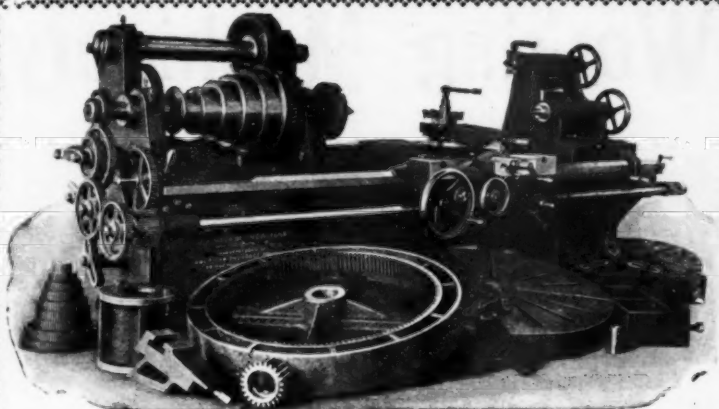
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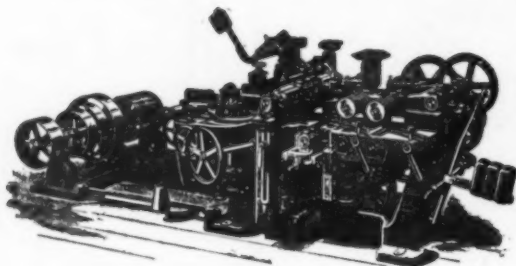
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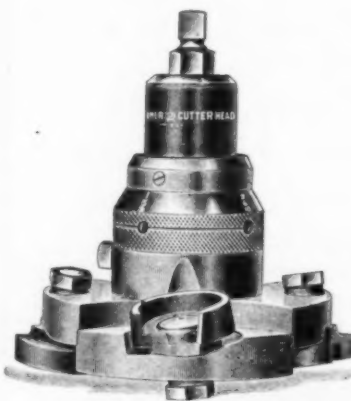
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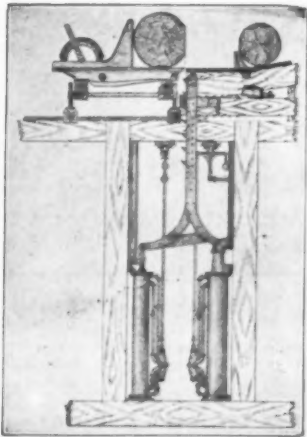
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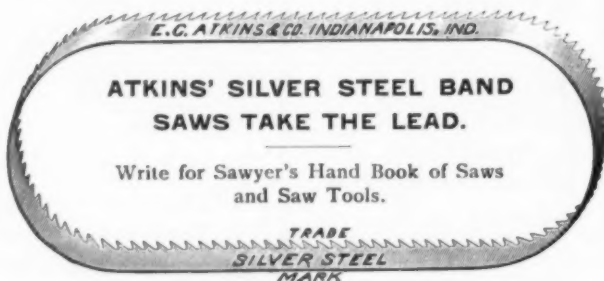
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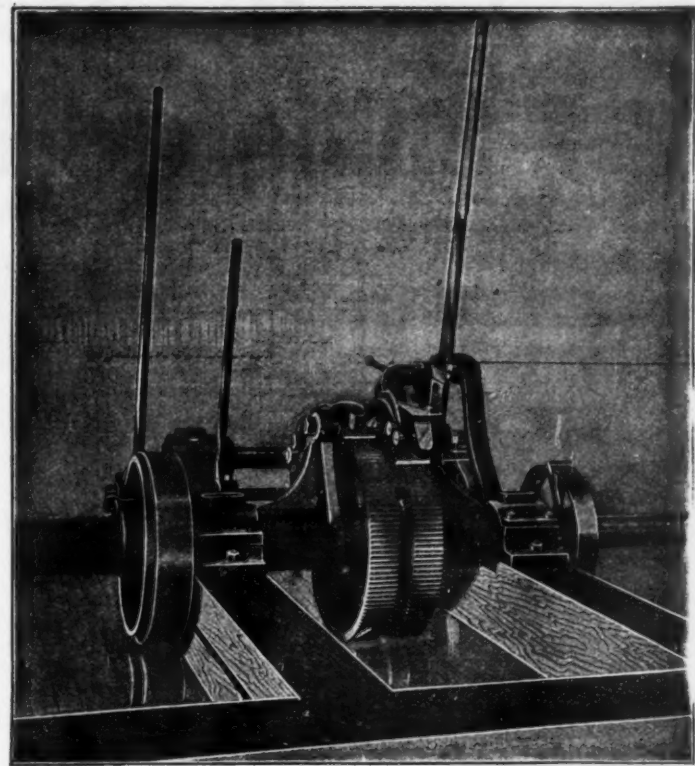
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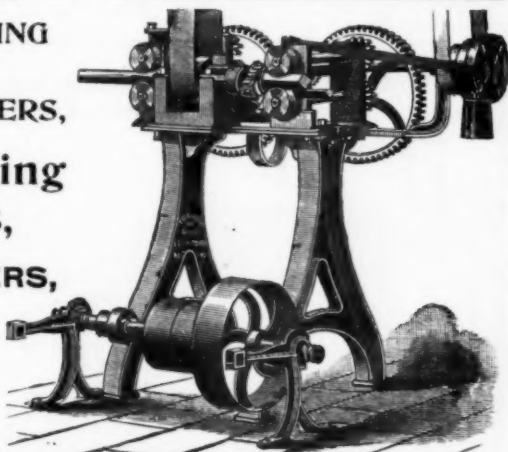
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Lathes for turning Handles for Brooms, Mops, Forks, Hoes, Axes, Picks, Hammers, Cant Hooks, and for Ball-Bats, Peavy-Hooks, Pike-Poles, Spokes, etc.

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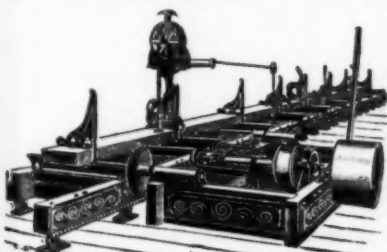
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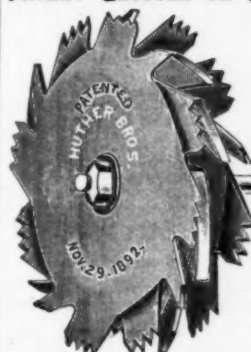
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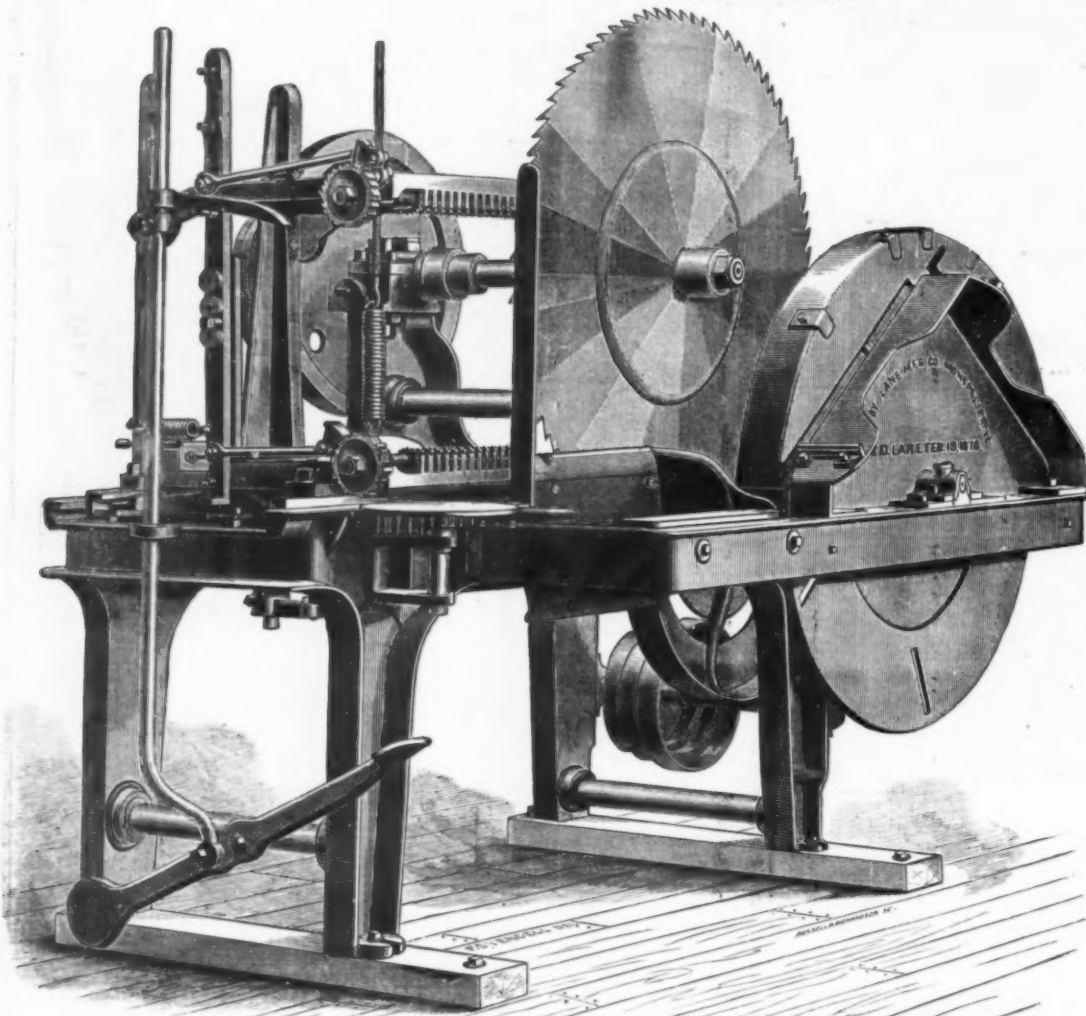
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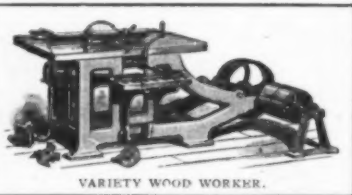
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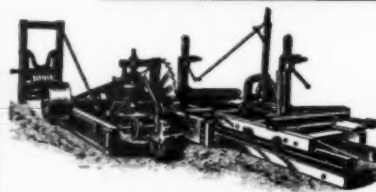
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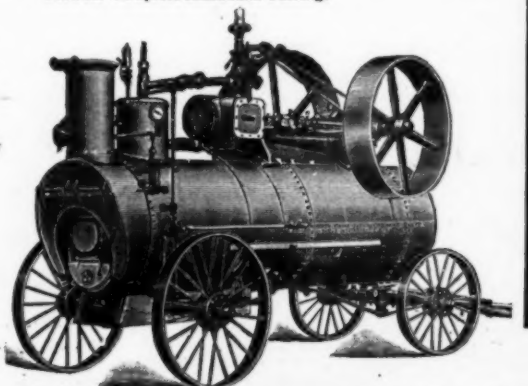
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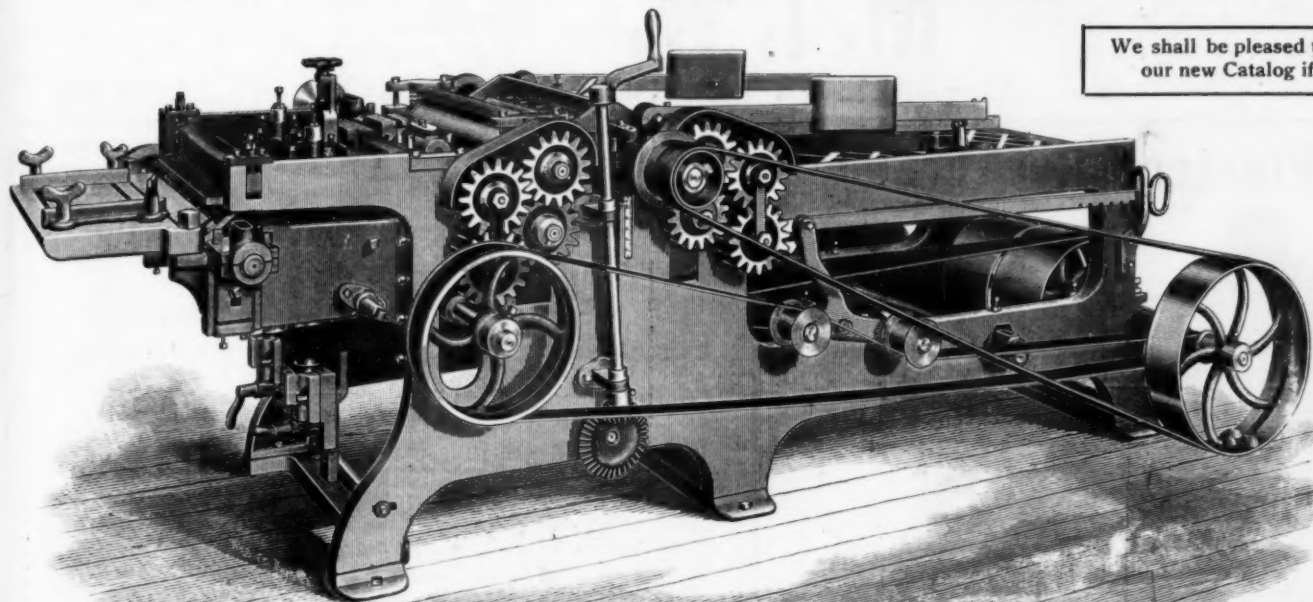
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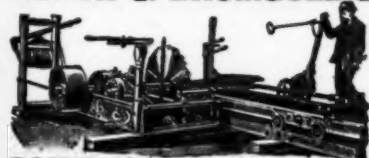
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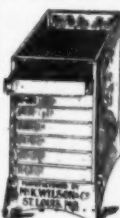
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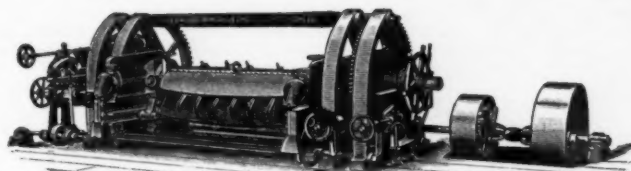


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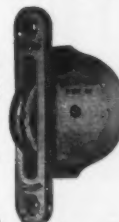


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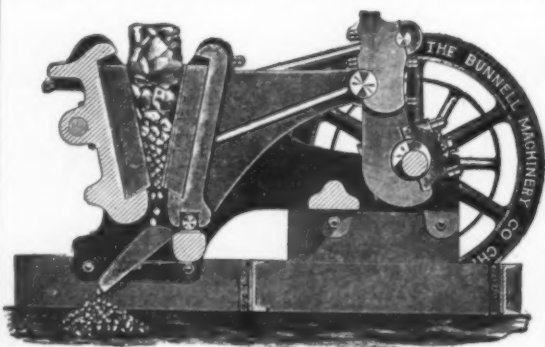
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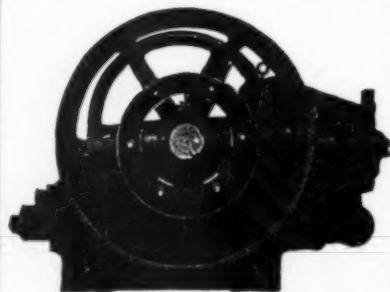


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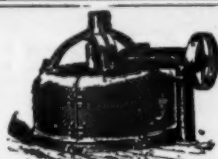
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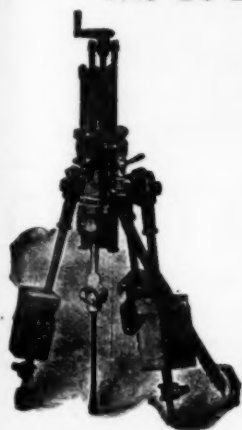
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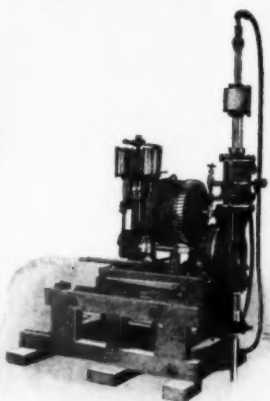
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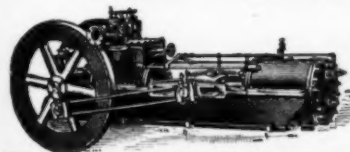
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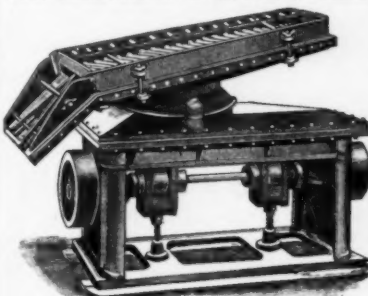
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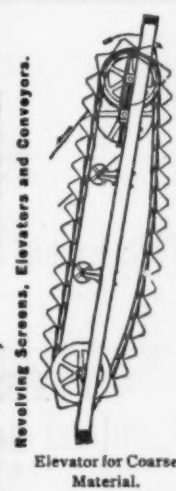
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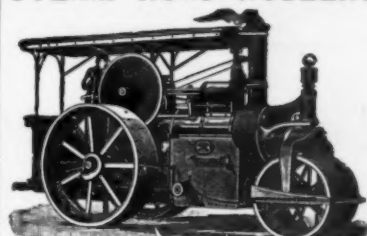
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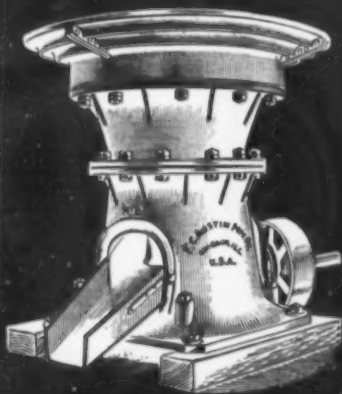
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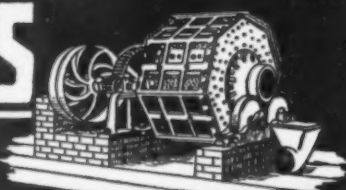
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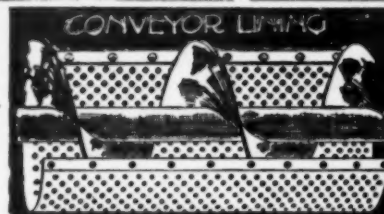
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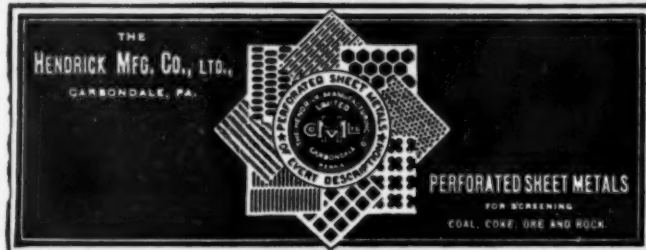
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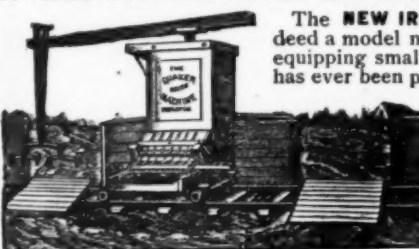
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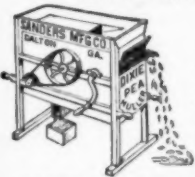
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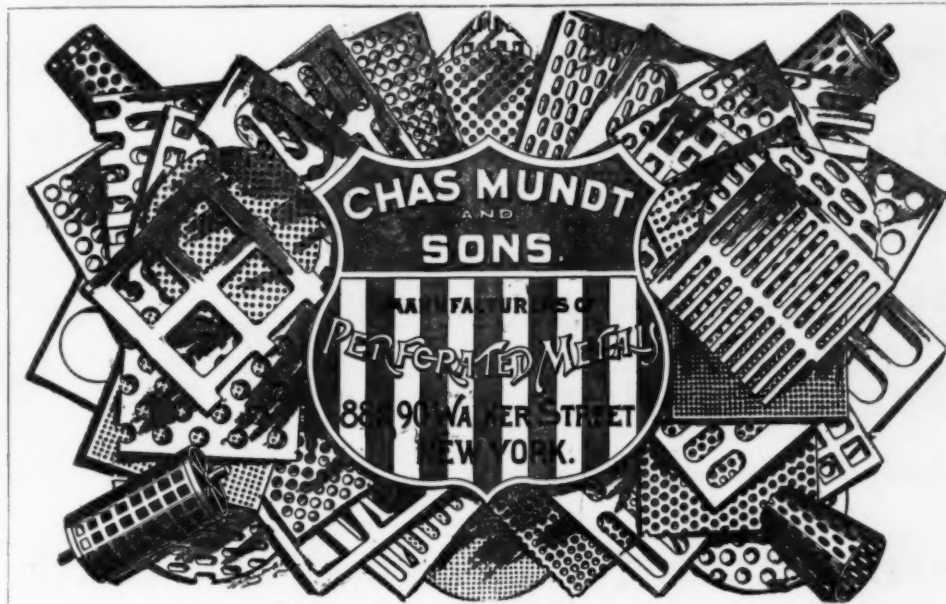
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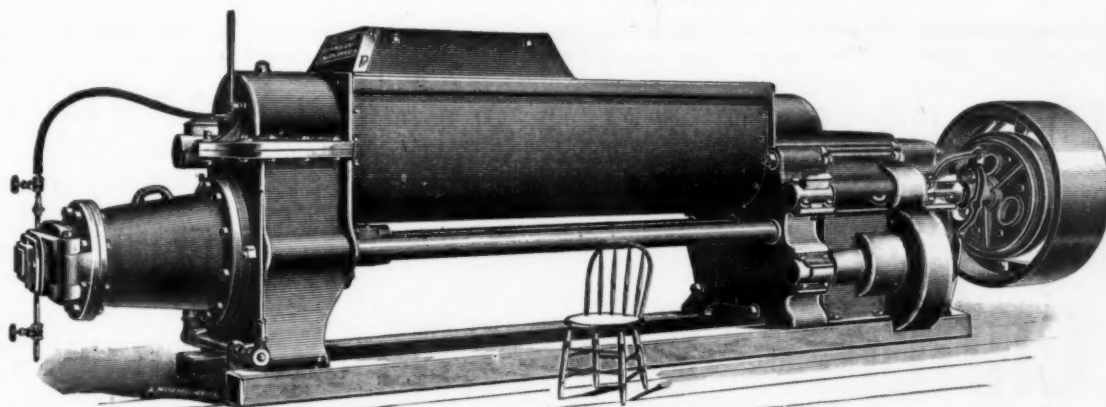
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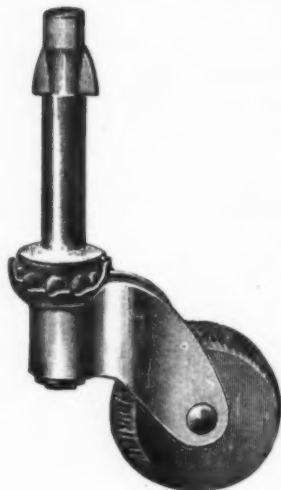
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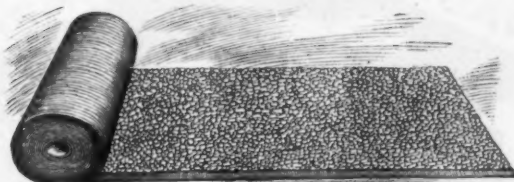
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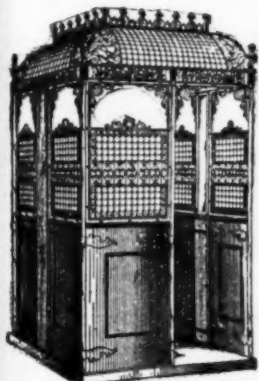
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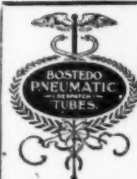
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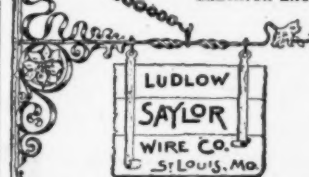


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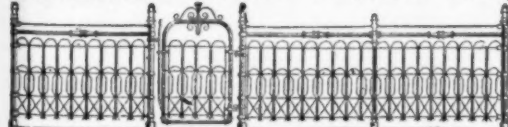
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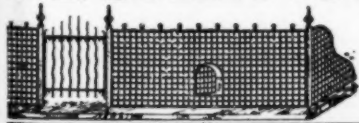
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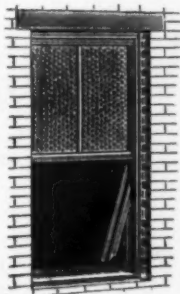
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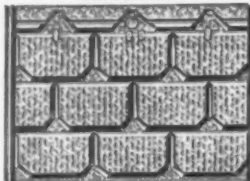
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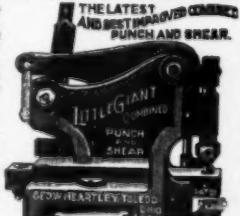
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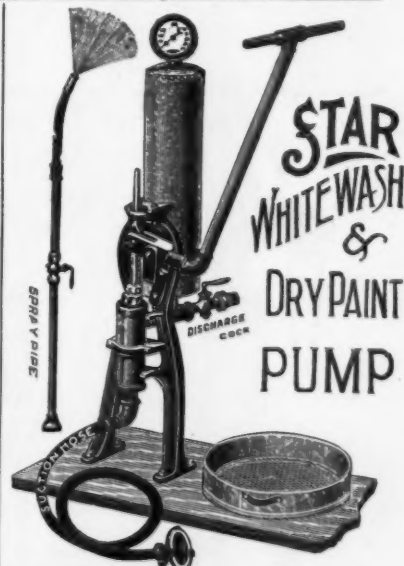
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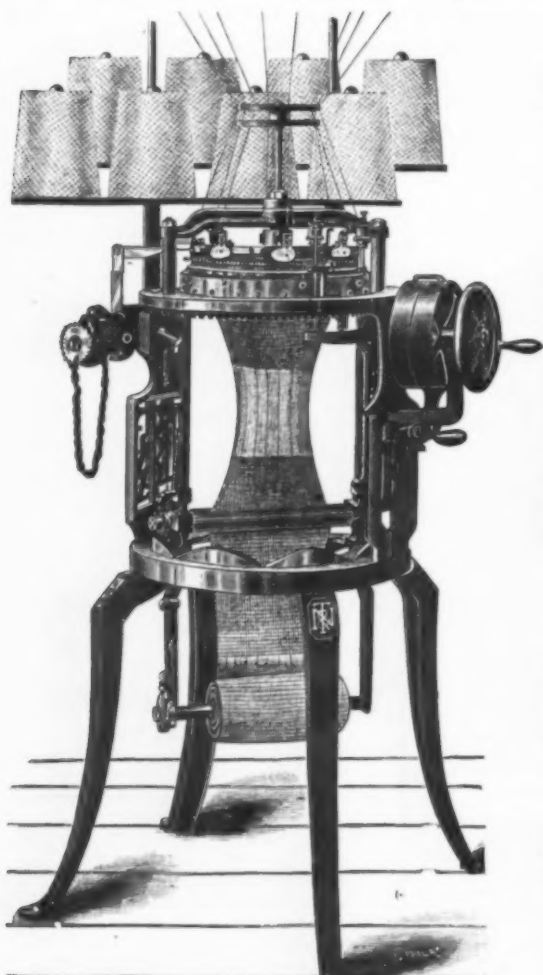
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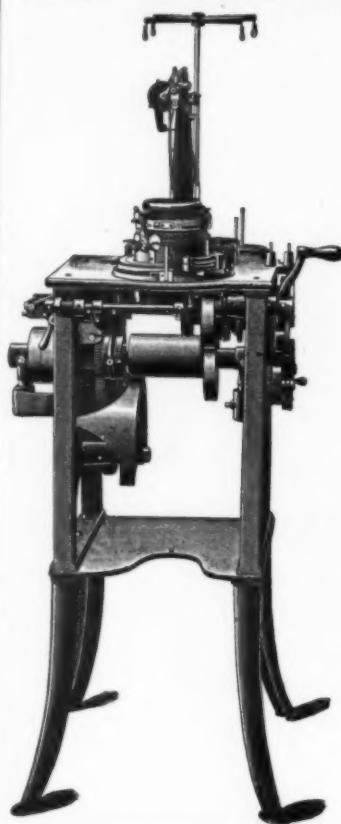
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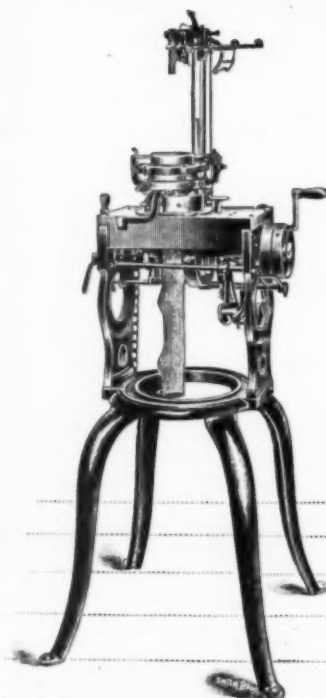
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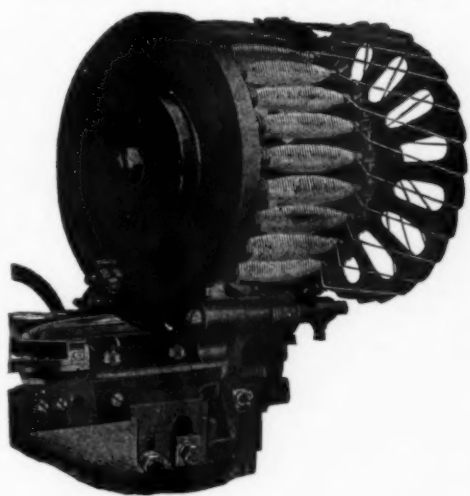
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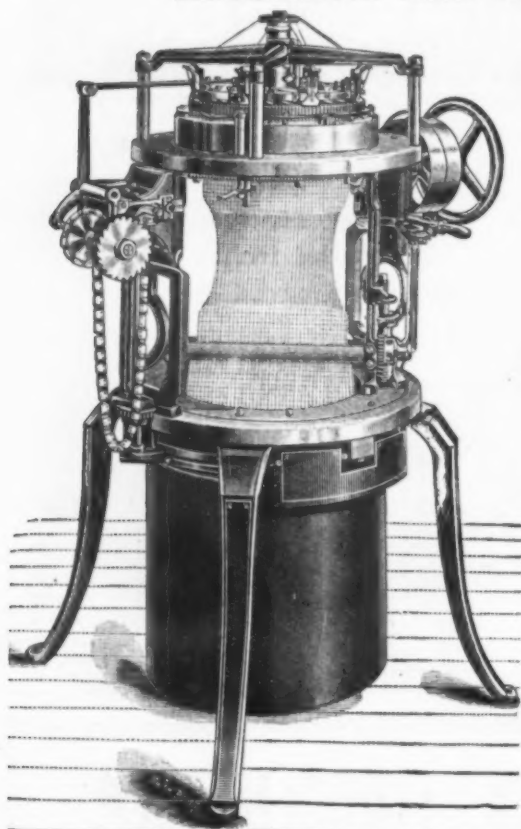
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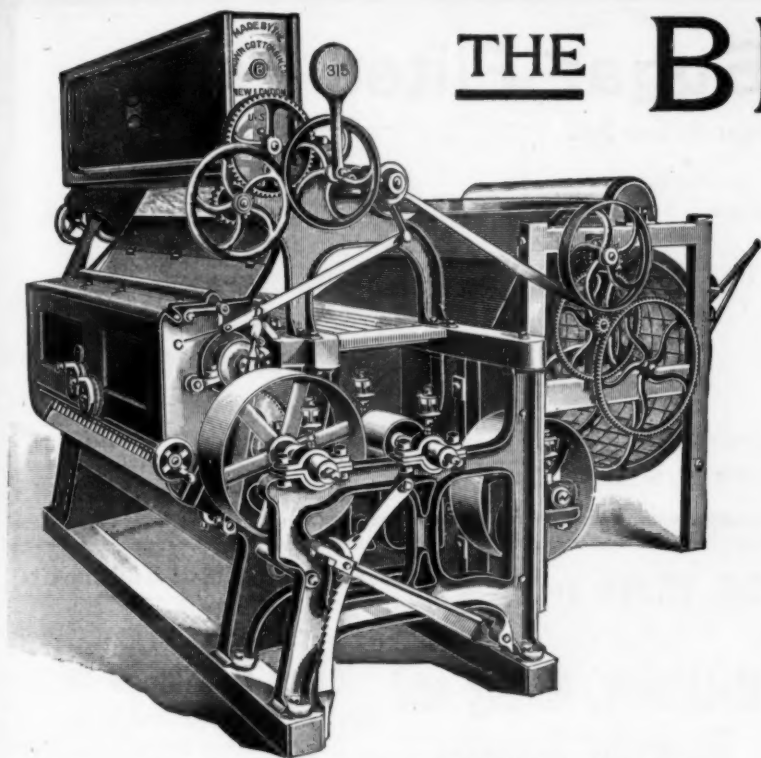
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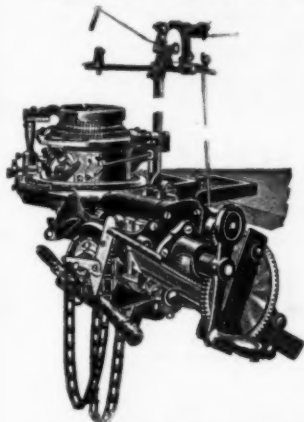
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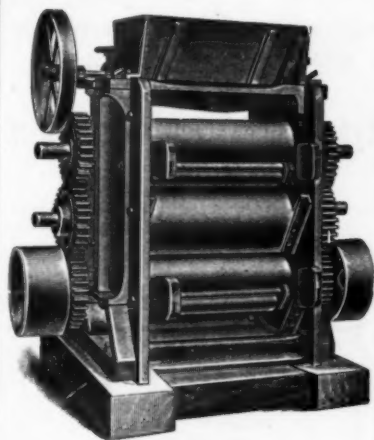
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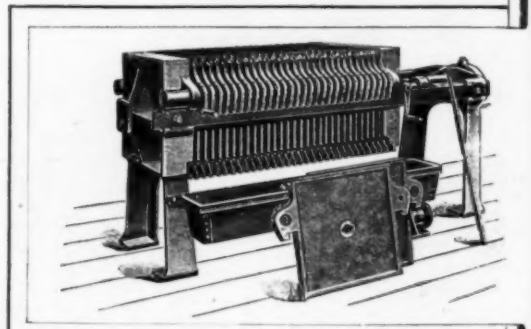
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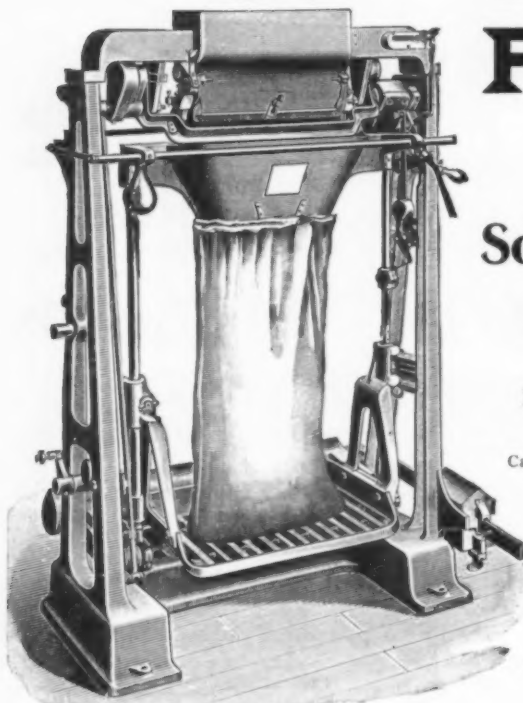
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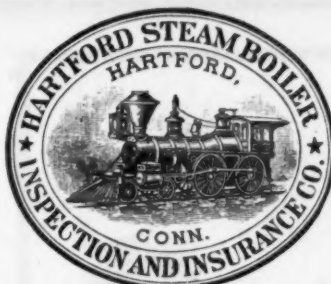
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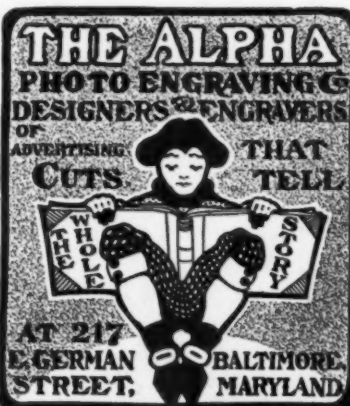
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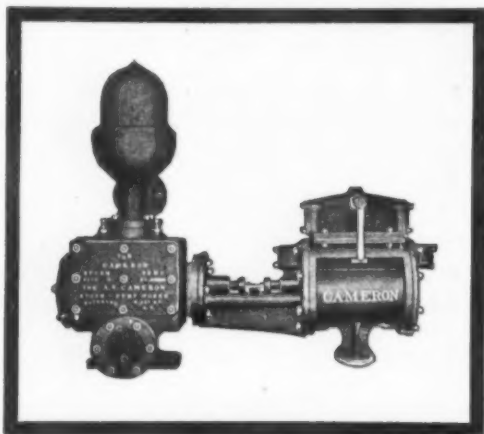
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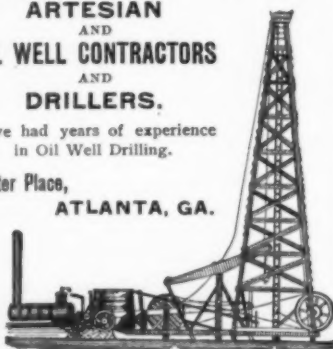
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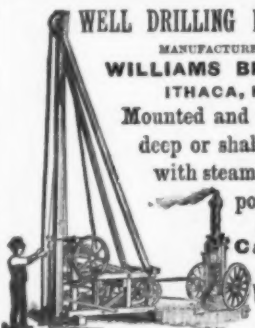
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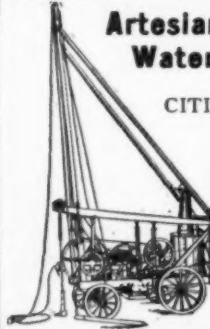


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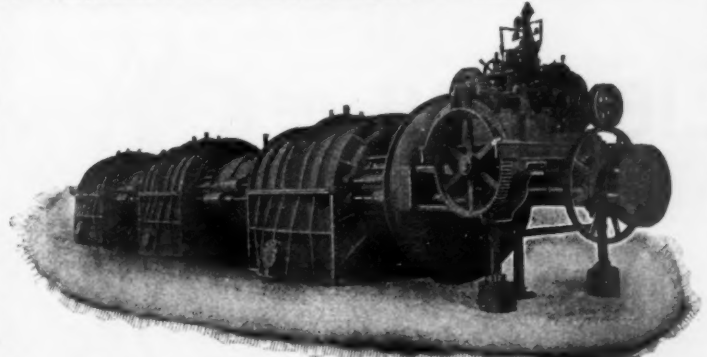
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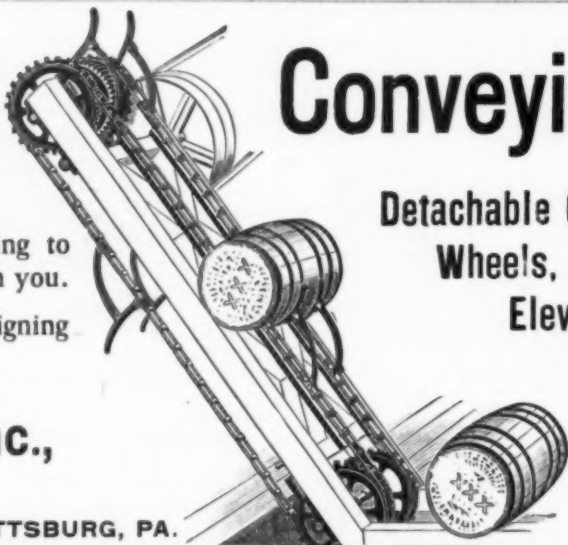
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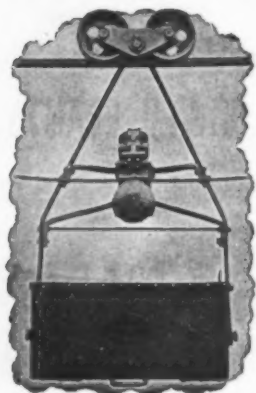
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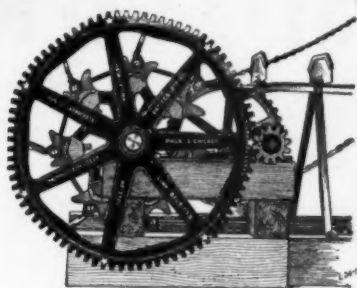
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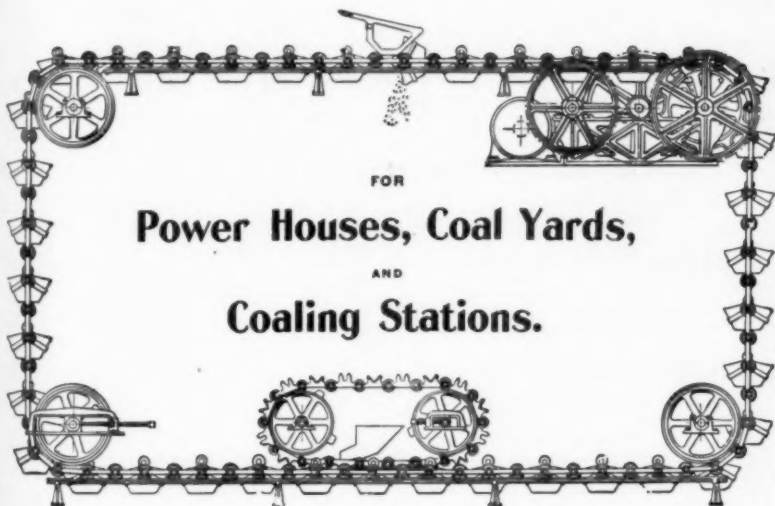
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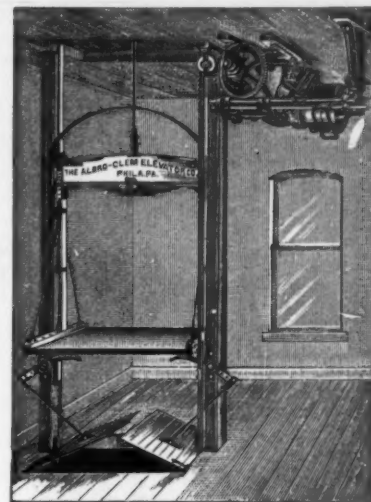
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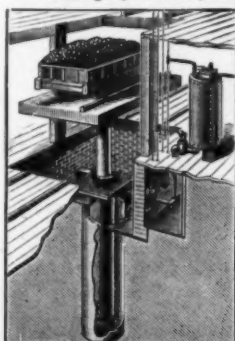
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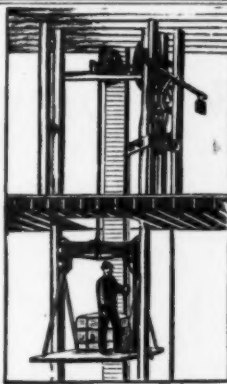
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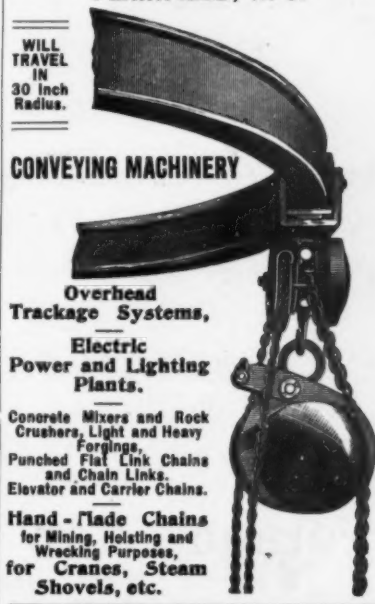
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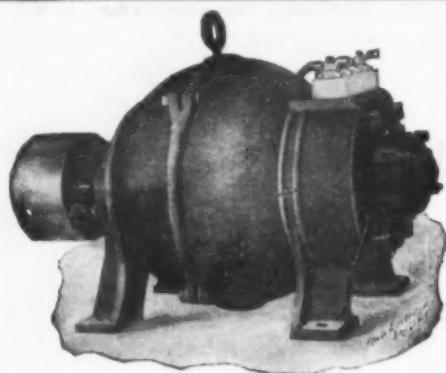
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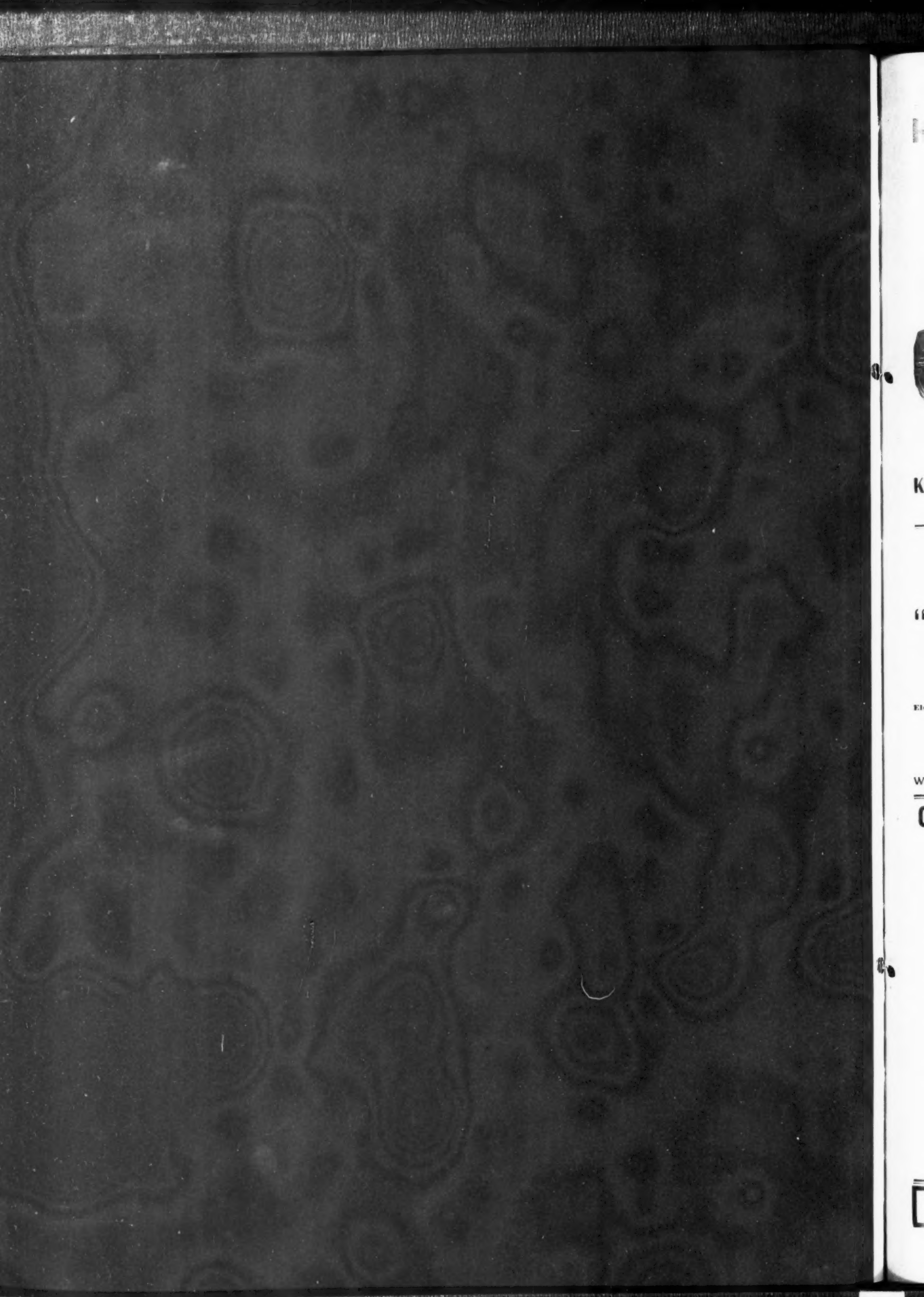
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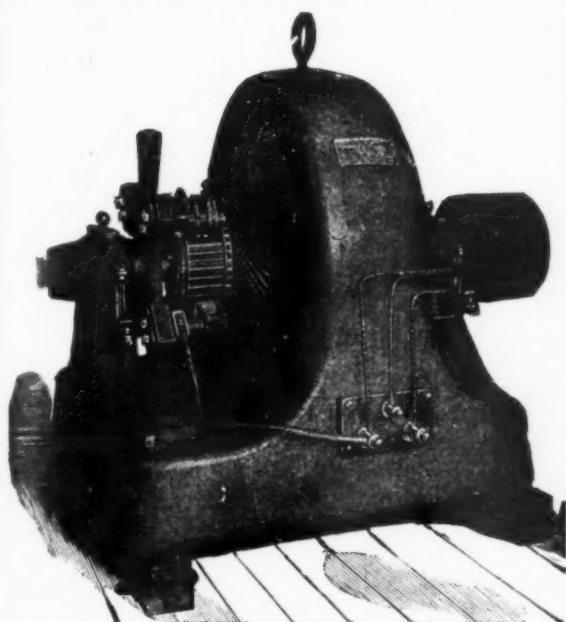
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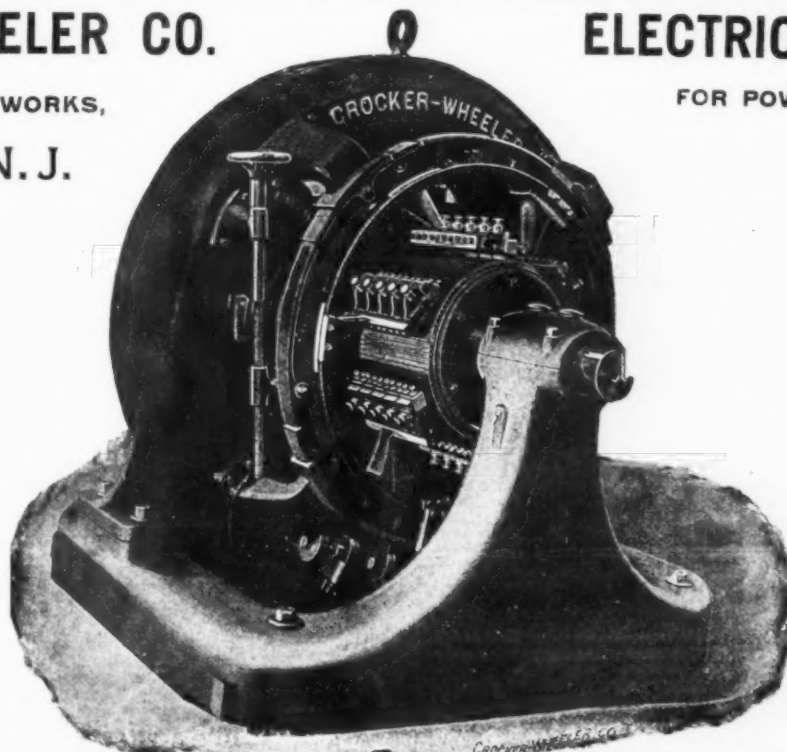
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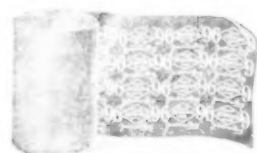
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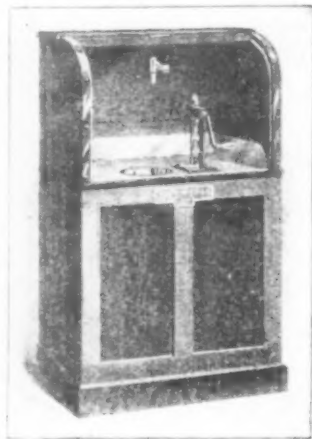
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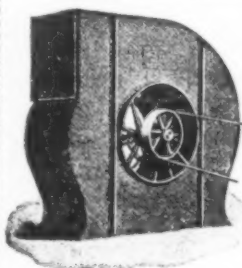
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